SAILOR TO AIRMAN: THE MILITARY CAREER OF GENERAL ROBERT T. HERRES

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DISCLAIMER

The conclusions and opinions expressed in this document are those of the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University.

ABOUT THE AUTHOR

Major Paul S. Rehome cross commissioned into the United States Air Force from the United States Naval Academy in 1995. After graduating from Basic Communications Officer Training in 1995, he became a Configuration Management Team Chief at USSTRATCOM. He was selected for Specialized Undergraduate Navigator Training at NAS Pensacola, Florida in 1998. After completing navigator, electronic warfare, and RC-135V/W initial qualification training in 1999, he was assigned to the 343d Reconnaissance Squadron at Offutt AFB, Nebraska. He served in various squadron, group, and wing billets during his seven year assignment to Offutt AFB. Major Rehome is a senior navigator and weapons officer with over 1800 flying hours, including 218 combat and 397 combat support hours in Operations ALLIED FORCE, ENDURING FREEDOM, and IRAQI FREEDOM. He has a bachelor's degree in Ocean Engineering from the United States Naval Academy, and a master's degree in Engineering Management from the University of Nebraska. In July 2009, Major Rehome was assigned to the 343d Reconnaissance Squadron as the Director of Operations at Offutt AFB, Nebraska. He is married to the former Alice Carnley, and they have four children, Brycen, Briggs, Leila-Anne, and Taggert.

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ABSTRACT

This study evaluates the military career of General Robert T. Herres. It analyzes two broad aspects that influenced him as a senior military leader: personal character traits and career diversity. The author assesses how General Herres' early diversity in jobs and character traits helped him develop the breadth and depth that would shape his performance as a senior leader. The conclusion suggests his career could serve as a model to encourage career diversity in the development of today's senior Air Force officers. The US Air Force should strive to develop senior leaders more broadly by challenging them with various educational, staff, and command experiences. The intentional development of senior leaders with wide-ranging backgrounds bolsters the cultivation for broad strategic perspectives within the Air Force. These well rounded leaders can transcend their major command and military service to integrate air and space power into support of our national security strategy.

CONTENTS

Chap	ter Page	,				
	DISCLAIMER ii					
	ABOUT THE AUTHOR iii					
	ACKNOWLEDGEMENTS					
	ABSTRACT v					
	INTRODUCTION					
1	SETTING THE CONDITIONS FOR A DIVERSE SENIOR LEADER 5					
2	CULTIVATING A CAREER OF BREADTH AND DEPTH FOR AN AIR POWER LEADER	2				
3	THE MAGNUM OPUS OF DIVERSITY)				
	CONCLUSION	,				
	BIBLIOGRAPHY					
Illustrations						
Figure						
1	Picture of General Robert T. Herres					

Introduction

The military departments have traditionally cherished the principle of diversified and generalized career development as a philosophy for potential leadership; this is the reason for the term 'general officer'.

-Major Robert T. Herres.¹

During a hot summer's day on 14 June 1950, Bob Herres stood with 1,144 other midshipman candidates during the start of plebe summer in front of Bancroft Hall at the US Naval Academy in Annapolis, Maryland.² During the induction ceremony, he committed to supporting and defending the US constitution by taking the oath of office as a Midshipman in the US Navy.³ What Herres did not know at this moment was his uninformed commitment to the nation would last forty years. His four year education and leadership experiences at the Naval Academy served as a foundation for his thirty-six year US Air Force career.

General Herres' military career encompassed a broad base of experiences that included flying fighters, bombers, tankers, and trainers; working in command and control, space, and intelligence; and learning in several professional military education assignments. From this diverse background, General Herres developed a well rounded strategic perspective and a leadership style that accentuated his strengths and minimized his weaknesses. These diverse opportunities facilitated his ability to lead US Air Force and joint commands with remarkable vision as a general officer. As a senior leader, he served on the Air and Joint Staffs, commanded a numbered Air Force and four major commands. Herres reached the pinnacle of his military career when he served as the first Vice Chairman of the Joint Chiefs of Staff.

¹ Major Robert T. Herres, "The Road Ahead' and Air Force Executive Development," (Maxwell Air Force Base, Alabama: Air Command and Staff College, June 1965), 1.

² US Naval Academy, *Statistical Data of the Graduating Class of 1954*, (Annapolis, MD: Nimitz Library Special Collections & Archives, 1954), 20.

³ Mike Nassr, 40th Anniversary 1954: Cold War Warriors (Paducah, KY: Turner Publishing Co., 1997), 7.



Figure 1. General Robert Tralles Herres Source: Ronald H. Cole et al., The Chairmanship of the Joint Chiefs of Staff (Washington, DC: Joint History Office, 1995), 154.

In all of these assignments, Gen Herres' personal traits stood him in good stead. The traits which dominated General Herres' character daily were integrity, composure, and faith. Furthermore, he developed a dedication to a lifetime of learning and from this he became an effective communicator. Each of these character traits guided Herres' decisions and actions during his committed service to the nation.

The principle of integrity served as the cornerstone of General Herres' character throughout his military career. Herres believed the nature of the military profession was so entwined with the very existence of our nation that military leaders must maintain the highest standard of integrity.⁴ He learned integrity was the most important characteristic a military leader could possess. His early career taught him people instinctively respected others with integrity.

Major General Hoover described General Herres as person of remarkable composure.⁵ His composure served him in numerous stressful situations. Herres' composed personality influenced his ability to make good decisions despite frequently inconsistent and underdeveloped information. It was his perpetual composure that influenced those who worked with him to maintain their confidence and remain calm in their challenging work environments.

⁴ General Robert T. Herres, "Guidelines for Leadership" (lecture, Air Command and Staff College, Maxwell AFB, AL, 4 June 1985).

⁵ Major General William Hoover, interview by author, 23 March 09.

General Herres was a devout Christian that epitomized faith in action. ⁶ He did not boisterously evangelize his Christianity with others; instead, he evangelized through his daily actions. He acted out his faith through a life dedicated to family, service, and community. ⁷ Herres lived the biblical verse of Philippians 2:3 daily, "Do nothing out of rivalry or conceit, but in humility consider others as more important than yourselves." ⁸ Putting this biblical principle into action, Herres was always quick to give credit and praise to others for his numerous professional accomplishments. ⁹ Moreover, he worked to improve his units for the good of the Air Force. He did not take these actions to seek personal glory. It was General Herres' Christian faith that committed him to remain humble despite his enormous success in the Air Force.

General Herres approached his military career and leadership style as a lifetime learning experience. Each of his professional military education (PME) accomplishments added another layer to his intellectual foundation for the application of air and space power in defense of the US. He did not confine his lifetime learning to formal PME, and General Herres espoused that the best learning transpires from the "School of Hard Knocks". ¹⁰ Herres championed learning from his and other's mistakes. His philosophy was "never let mistakes go to waste; they cost too much!" ¹¹ As a result of his robust intellectual development, General Herres became very effective at championing air and space power's various applications within the US military's joint construct.

General Herres' educational experiences helped him become an effective communicator. He had the ability of accurately conveying his concepts and ideas to subordinates, peers, and supervisors. Herres possessed the ability to make any person he talked with feel as though they were the most important person in the room. Furthermore, Herres knew the value of listening. He first

⁶ Reverend Ronald Christian, interview by author, 9 March 09.

⁷ Reverend Ronald Christian, Evangelical Lutheran Church in America, Fairfax, VA, to the author, email, 3 April 2009.

⁸ The Holman Student Bible (Nashville, TN: Holman Bible Publishers, 2007), 1570.

⁹ Christian, interview.

¹⁰ Herres, "Guidelines for Leadership."

¹¹ Herres, "Guidelines for Leadership."

learned the importance of this trait from his father. Fred Herres encouraged his son to be a good listener. ¹² General Herres continuously worked at listening to understand other people's points of view. ¹³ When anyone engaged with General Herres in conversation, they always felt that they had his undivided attention. ¹⁴

This thesis evaluates how General Herres' career diversity influenced his generalist career path and suggests his career could serve as a model to encourage diversity in the development of today's senior Air Force officers. The USAF should strive to develop generalists by challenging potential senior leaders with broad educational, staff, and command experiences. The intentional development of generalists with broad backgrounds bolsters the cultivation for well rounded strategic perspectives within the Air Force. These well rounded leaders will then have the ability to transcend their major command and military service in order to properly integrate air and space power into support of our national security strategy. 15

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 $^{^{\}rm 12}$ General Robert T. Herres, interview by Paul Ringenbach, 4 January 1995, transcript, 44, Mrs. Shirley Herres, Lincoln, NE, 27.

¹³ Herres, interview, 27.

¹⁴ Commander William Croom, USNA Class 1954, to the author, email, 14 January 2009.

¹⁵ Major Robert T. Herres, "The Road Ahead' and Air Force Executive Development," (Maxwell Air Force Base, Alabama: Air Command and Staff College, June 1965), 110.

Chapter 1

Setting the Conditions for a Diverse Senior Leader

My four years at the Naval Academy were the bridge between youth and the career that followed. I came to appreciate many times during my career the value of the education and training that we experienced as Midshipmen and the many subliminal ways in which it influenced my thinking and my reaction to difficult situations. I am eternally grateful for what this institution has meant throughout my life.

-General Robert T. Herres.¹

Immediately after his induction to the US Naval Academy, newly dubbed Midshipman Robert "Bob" Herres' rigorous plebe summer rudely started. A Master Chief Petty Officer (MCPO) jumped to his feet in front of Bancroft Hall and eagerly ordered the plebes of 11th Company to fall into formation. Once in formation the MCPO thundered the command, "Get your eyes in the boat, plebes!" Knowing what he meant, the plebes immediately turned their eyes and head forward. The hard-nosed MCPO ranted, "You plebes have five basic responses. Those responses are: yes, Sir; no, Sir; I'll find out, Sir; no excuse, Sir; and Aye, Aye, Sir. Do you understand me?" At this moment, young Bob from East High School in Denver, Colorado was probably wondering why he volunteered for this harsh treatment and perhaps began to view the next four years with trepidation.³

During the initial shock of plebe summer, it is likely Bob's thoughts turned to the two influential individuals that encouraged his attendance to a service academy. Bob's older brother, Fred W. Herres, Jr., graduated from the US Military Academy with the class of 1943 and received a commission in the

¹ Gen Robert T. Herres (Distinguished Graduate Ceremony address, US Naval Academy, Annapolis, MD, 31 March 2006).

² Reef Points 2008-2009: The Annual Handbook of the Brigade of Midshipmen (Annapolis, MD: Naval Institute Press, 2008), 111.

³ Department of the Air Force, "Biography of General Robert T. Herres," http://www.af.mil/information/bios/bio.asp?bioID=5783 (accessed 6 March 2009).

infantry. Fred, Jr. suggested Bob apply for both the Military and Naval Academies to increase the odds for a congressional appointment. Ironically Fred, Jr. had deep-seated aspirations to attend the Naval Academy and Bob wanted to attend the Military Academy, but both of them received appointments to the opposite academy of their preference. The other influence in Bob's decision to attend the Naval Academy was his father, Fred Herres, Sr. Also steeped in military tradition, his father served in the US Army Signal Corps and taught Morse code to Army Air Service aviators during WW I. After Bob decided to commission in the Air Force, his father often joked that his service in the Signal Corps made him a "charter member" of the US Air Force. Bob's admiration for his brother and father's military service acted as catalysts for his decision to join the military.

Midshipman Herres learned many lessons while attending the Naval Academy. He learned how to make decisions in stressful environments. He learned military tasks required teamwork. He learned how to prioritize his daily responsibilities in a time-constrained environment. Midshipman Herres learned how to gain and apply knowledge from his and other's mistakes. The academy experience instilled the "do or die" mentality into his very being. Most importantly, Bob learned how important integrity is for a member of the military profession. The Academy educated all midshipmen that integrity served as the center of every military officer's character. 9

⁴ Major General George W. Cullum, "Biographical Register of the Officers and Graduates of US Military Academy," Supplement, Volume IX, 1940-1950 (The Association of Graduates US Military Academy, 1950), http://digital-library.usma.edu/libmedia/archives/cullum/VOL9_PART0015.PDF (accessed 1 March 2009).

⁵ General Robert T. Herres, interview by Paul Ringenbach, 4 January 1995, transcript, 44, Mrs. Shirley Herres, Lincoln, NE, 3.

⁶ Ronald H. Cole et al., *The Chairmanship of the Joint Chiefs of Staff* (Washington, DC: Joint History Office, 1995), 155.

⁷ General Herres, interview, 2.

⁸ Major General Bill Hoover (US Naval Academy Class of 1954 Alumni, Williamsburg, VA), interview by author, 19 January 09.

⁹ Reef Points 2008-2009: The Annual Handbook of the Brigade of, 81.

The Naval Academy stressed integrity in every aspect of Midshipmen life. For Bob, the Naval Academy's Honor Concept embodied the idea of integrity. ¹⁰ The Honor Concept served as the ethical baseline for him and every Midshipman. The Naval Academy reinforced the importance of the Honor Concept by posting it on the backside of every door in Bancroft Hall, the living quarters for the entire Brigade of Midshipmen. Furthermore, upperclassmen reinforced the importance of integrity by habitually directing plebes to repeat "Integrity is doing the right thing because it is the right thing to do!" ¹¹

Bob also acquired important military skills at the Academy, including learning to fly bi-wing seaplanes over the Chesapeake Bay during Aviation Orientation Training. ¹² The Midshipmen affectionately referred to the bi-wing N-3N Canary as "The Yellow Peril." ¹³ After Herres completed his five flights for aviation orientation training, his flight instructor assigned him a good grade and encouraged him to become an aviator. ¹⁴ Midshipman Herres' newly attained passion, coupled with his flight instructor's inspirational recommendation, encouraged him to pursue a military flying career after graduating from the Academy.

During the mid-1950s, the Naval Academy did not allow midshipmen to enter directly into flight training after graduation. In order to fly in naval aviation, Bob had to first serve a tour on sea duty. After the completion of the sea duty, he could apply for a transfer to aviation through his commanding officer and higher chain of command. But Midshipman Herres was not interested in sea duty and did not want to chance missing an opportunity to become a pilot. The only possible way to enter into flight training directly after

¹⁰ Reef Points 2008-2009: The Annual Handbook of the Brigade of, 81.

¹¹ Hoover, interview.

¹² Cole et al., The Chairmanship of the Joint Chiefs of Staff, 155.

¹³ General Herres, interview, 5.

¹⁴ General Herres, interview, 5.

¹⁵ There is ambiguity between the official Naval Academy Class of 1954 selection process for cross commissions into the Air Force and General Herres' recollection of the process. This ambiguous situation occurred because late in year for the Class of 1954, the US Navy changed the policy and allowed Midshipmen to enter directly into Naval Aviation. Major General Bill Hoover, interview 29 Jan 09.

graduating from Annapolis was to accept a commission in the Air Force. ¹⁶ As young people sometimes do, Herres prioritized his self-interest above the Navy's needs and decided the Air Force seemed to be the "right" choice for him. Getting in on the ground floor for the development of the new service excited Bob. Another advocate for Herres' potential service in the Air Force was Captain Sam "Midnight" Lessey. "Midnight" was a USAF Officer who taught weather for the Aviation Department at USNA. His positive portrayal and advocacy for the Air Force further influenced Midshipman Herres' decision to cross commission. Moreover, the Air Force provided a greater possibility to receive an assignment close to his hometown of Denver, Colorado.

A commission in the Air Force as a Naval Academy graduate was not automatic. At Annapolis, each midshipman from the senior class participated in a service selection process. During the class of 1954 service selection, each midshipman chose his assignment from the service selection board set up inside Memorial Hall. The order in which the midshipman got to pick their preferred service was determined by drawing a number from a hat. The class president went around from room to room with a hat full of numbers written on small pieces of paper. The class secretary followed him with a class roster and recorded the number drawn next to each senior's name. Interestingly, a midshipmen's class standing was not taken into consideration for providing the sequence in the selection process as it is done today. Midshipmen were able to service select an Air Force billet until there was no longer any left on the white board. The only caveat to selecting Air Force aviation was the Midshipman had to pass a flight physical. ¹⁷

As a result of the National Security Act of 1947, the US had created the Air Force as a separate service. ¹⁸ In order to help populate the fledgling Air Force with a young and capable officer corps, twenty five percent of each graduating class from Annapolis and West Point could accept a regular

¹⁶ General Herres, interview, 5.

¹⁷ General Herres, interview, 6.

¹⁸ Jeffrey G. Barlow, *Revolt of the Admirals: The Fight for Naval Aviation 1945-1950* (Washington, DC: Ross & Perry, Inc., 2001), 52.

commission in the Air Force. ¹⁹ The twenty-five percent transfer opportunity remained until the establishment of the US Air Force Academy in 1954, and then the rate dropped to twelve percent of the graduating class. ²⁰ Luckily for Midshipman Herres, there were still Air Force billets left on the white board when his lottery number came up.

After commissioning in the Air Force, Second Lieutenant Herres reported to Marana Air Force Base, Arizona and entered primary undergraduate pilot training on 30 July 1954 as a member of class 55-S.²¹ While at Marana, Lieutenant Herres learned to fly the T-34 Mentor and the T-28 Trojan. During flight training, Lieutenant Herres quickly demonstrated a youthful composure. After his seventh training flight, the instructor pilot got out of the aircraft and told Herres to taxi back out, takeoff, circle the field, re-enter the traffic pattern and land.²² This was a defining moment for pilot training, the solo flight. Lieutenant Herres took off, climbed up to pattern altitude, and was two to three miles from the field when his aircraft's engine quit. He attempted several air starts with no success. Herres calmly called the tower and told them his engine was out and requested permission to land. Then he composedly performed a dead stick landing. Lieutenant Herres simulated engine out landings with his instructor but he had never made a landing with the engine actually shut down. Lieutenant Herres completed all requirements for primary training and graduated on 15 February 1955. 23 At this point in flight training, the class was split into two groups for basic flight training. One group went to fly multi-engine aircraft and trained in the B-25 Mitchell.²⁴ The other group went to fly jets and trained in the T-33 Shooting Star. 25 Lieutenant Herres was among the select few to get into the new jets.

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¹⁹ Major General Robert A. Rosenberg, "The Annapolis Connection," *Air Force Magazine*, February 1984, 74.

²⁰ Rosenberg, "The Annapolis Connection," 77.

²¹ History, 3307th Pilot Training Squadron, 1 July – 31 December 1954, 2.

²² Major General Robert Hoover, "Bob Herres" (Eulogy for General Robert T. Herres' funeral), 2.

²³ History, 3307th Pilot Training Squadron, 1 July – 31 December 1954, Document III, 1.

²⁴ General Herres, interview, 9.

²⁵ General Herres, interview, 9.

Lieutenant Herres reported to Webb Air Force Base, Texas and entered Basic Single Engine (Jet) Pilot Training on 26 February 1955. ²⁶ At basic training, Lieutenant Herres flew 40 hours in the T-28 Trojan and 80 hours in the T-33 Shooting Star aircraft to qualify as a pilot for single-engine jet fighter-type aircraft. ²⁷ Lieutenant Herres was one of forty-three pilots earning their wings on 1 August 1955. ²⁸ He was among the few pilots from class 55-S that was assigned an F-86 Sabre in the Air Defense Command. ²⁹

He temporarily changed station to Perrin AFB, Texas for fundamental training in the F-86D Sabre "Dog". The F-86D Sabre "Dog" was an all weather radar equipped version of the F-86 Sabre. 30 This fundamental training was preparation for his permanent assignment to the 93rd Fighter-Interceptor Squadron (FIS) at Kirtland AFB, New Mexico. 31 As a pilot in the 93rd, Lieutenant Herres was responsible for achieving and maintaining a combat ready qualification to destroy enemy airborne weapons that penetrated the 34th Air Division's area of responsibility. 32 More specifically, the 93rd FIS ensured no unauthorized aircraft flew over the nuclear weapons support facilities in the Southwestern US, particularly at Los Alamos.³³ In preparation for this role, Herres mastered the ability to synchronize the flight control system with rocket firing to engage enemy airborne weapon systems.³⁴ Herres proved his mastery of the F-86D during a Central Air Defense Force Evaluation Team visit and was recognized as the "Top Squadron Interceptor Pilot". 35 After achieving an acceptable level of combat ready proficiency in the F-86D, Lieutenant Herres received his first opportunity to diversify within the Air Force, taking on the

²⁶ History, 3560th Pilot Training Wing, 1 July – 31 December 1955, 8.

²⁷ History, 3560th Pilot Training Wing, 1 January – 30 June 1955, 3-4.

²⁸ History, 3560th Pilot Training Wing, 1 July – 31 December 1955, 8.

²⁹ History, 3560th Pilot Training Wing, 1 July – 31 December 1955, 18.

³⁰ History, 93rd Fighter-Interceptor Squadron, 30 Jun 1958, 4.

³¹ General Herres, interview, 9.

³² History, 93rd Fighter-Interceptor Squadron, 30 Jun 1958, 2.

³³ General Herres, interview, 9.

³⁴ General Herres, interview, 7.

³⁵ Officer Effectiveness Report on First Lieutenant Robert T. Herres, 1 February 1957 – 7 July 1957.

additional duty of the Electronics and Fire Control Systems Maintenance Officer while continuing his pilot responsibilities for the 93rd FIS.³⁶

Lieutenant Herres learned common aircraft maintenance practices and procedures while working as a maintenance officer. Performing the duties for this job helped Herres learn a great deal about the F-86D. This knowledge improved his ability to troubleshoot the aircraft, especially in the event of an in-flight emergency. Additionally, the maintenance officer opportunity was his first chance to lead a flight of enlisted personnel. This certainly built upon his communications skills. He worked at accurately explaining his concepts and ideas to subordinates and superiors alike. Herres quickly learned his workers dealt with hardware, tools, and equipment. In contrast, he would need to deal with people, concepts, and ideas as the leader of the electronic maintenance flight.³⁷

Since Lieutenant Herres was not married when he checked into Kirtland AFB, he decided to live in the bachelor officer's quarters (BOQ). The officers living in the BOQ often ate together at the Officer's Club. This presented an opportunity for Herres to meet people outside of his squadron. During one particular dinner in the summer of 1955, Herres befriended a senior controller that had a large social network outside of the military community. At the time, this man was dating a coed attending the University of New Mexico (UNM). Her name was Shirley Jean Sneckner and she was conveniently a member of the Chi Omega Sorority. Shirley graciously set Herres up on several blind dates with acquaintances from the campus sororities. A few months later in the spring of 1956, Lieutenant Herres began dating Shirley. This relationship led to marriage on 16 April 1957 in Albuquerque, New Mexico at

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³⁶ Department of the Air Force, "Biography of General Robert T. Herres," http://www.af.mil/information/bios/bio.asp?bioID=5783 (accessed 6 March 2009).

³⁷ General Robert T. Herres, "Guidelines for Leadership", AU-24, Concepts for Air Force Leadership, 402.

³⁸ General Herres, interview, 7.

³⁹ Shirley Herres (Widow of General Herres), interview by author, 22 Jan 2009.

⁴⁰ Shirley Herres, interview.

the St. Paul Lutheran Church.⁴¹ A year later, Julie, their first child, was born at nearby Saint Joseph's hospital.

While Herres was stationed at Kirtland AFB, the Air Force decided it needed more officers with graduate degrees in technical fields. 42 The Air Force screened the records of all the Lieutenants with engineering undergraduate degrees for potential attendance in an engineering graduate program. Herres passed the filter and the Air Force offered him an opportunity to attend the Massachusetts Institute of Technology (MIT) in the electrical engineering program. 43 Herres sought the advice of squadron leaders and others before deciding to attend MIT. His mentors counseled him on the potential cost and benefits of leaving the fighter pipeline so early in his career. On the one hand, critics counseled that graduate school attendance would put Herres at a disadvantage as compared to his peers, who stayed in the traditional fighter pilot pipeline. The critics believed foregoing the experiences of serving in more positions within fighter squadrons, groups, and wings would taint Herres' credibility in the fighter pilot community. This situation could potentially affect Herres' promotion possibilities in the future. On the other hand, advocates pointed out Herres' early success as an F-86D pilot and believed the diversity gained from graduate school would benefit him more because it would differentiate his record from his peers. After comparing the costs and benefits, Herres decided to attend graduate school. The Herres family loved the notion of living in Boston for a couple of years, but the Air Force cut the MIT program before they ever left Kirtland AFB.

The situation got worse for the Herres family because their landlord had already signed a different lease for new tenants. The day their movers showed up, Lieutenant Herres and Shirley did not have a place to live or orders for a permanent change of station. On top of that, the new tenant's moving truck showed up the same day at the same time. The new tenant's movers started

⁴¹ General Herres, interview, 8.

⁴² General Herres, interview, 9.

⁴³ Shirley Herres, interview.

unloading their furniture on the front lawn. Lieutenant Herres left the house that day in a bit of a rush at 0730. As he was running out the door, Shirley asked him with a bit of a panic in her voice, "What am I supposed to do about the movers?" and Herres replied in a composed manner, "Make them coffee and entertain them for awhile. I'll be right back!" He went to the base housing office and got a base house by 0800 that day.⁴⁴

Meanwhile, the AF offered Lieutenant Herres another opportunity to attend graduate school. The AF offered him a billet in the Air Force Institute of Technology (AFIT) at Wright Patterson AFB, OH. 45 It was not MIT, but Herres graciously accepted the offer to attend AFIT in the recently accredited graduate program for Electrical Engineering with a Guidance and Control specialization. 46 Herres and family permanently changed station to Wright Patterson AFB in August 1958. 47

The Herres family decided to purchase their first house for \$13,000 in Dayton, Ohio because the base housing on Wright Patterson AFB was less than Shirley desired. Herres would be promoted to Captain halfway through AFIT, which further influenced their decision to purchase a home. The decision to buy a house provided an acceptable environment for Shirley to raise Julie and her new brother, Michael, while Captain Herres spent long hours in the engineering lab and class. 49

Captain Herres found the Electrical Engineering program challenging and fast paced. AFIT's graduate programs were eighteen months long, which represented a significantly compressed time frame as compared to an equivalent civilian graduate program. He definitely relied on faith and family for the strength to meet the rigors presented by the academic program. The

⁴⁴ Shirley Herres, interview.

⁴⁵ General Herres, interview, 9.

⁴⁶ AFIT gained accreditation for degrees in electrical engineering in 1955. Air Force Institute of Technology, "AFIT History," http://www.afit.edu/about.cfm?a=history (accessed 27 Mar 2009).

⁴⁷ General Robert T. Herres, official biography, Secretary of the Air Force, Office of Public Affairs, Washington, D.C., 3.

⁴⁸ Shirley Herres, interview.

⁴⁹ Michael Herres was born 20 June 1959 at the Wright Patterson AFB hospital. Shirley Herres, interview.

AFIT program presented Captain Herres his first chance to work with a computer. The analog computer at AFIT took up an entire room in the engineering building.

The thesis Captain Herres co-authored with First Lieutenant Thomas C. Brandt for their AFIT graduate degree took on a joint perspective. They wrote their Guidance and Control thesis on the feasibility of an inertial navigation system for the US Army's H-37A troop helicopter. The thesis utilized data generated by an analog computer for system analysis in an inertial navigation system. The thesis solved the Army's problem of the inability to operate their H-37A helicopters under conditions of darkness, inclement weather, and low altitudes without external navigational assistance. 52

In writing this thesis, it was necessary for Captain Herres to delve into US Army doctrine for mobility warfare. He learned the necessity of the principle of mobility for US infantry forces. More importantly, Herres realized helicopters provided the avenue for the US Army to achieve effective battlefield mobility, but with great risk during daytime operations in an austere environment. The risk incurred was due to the relatively slow moving and vulnerable altitude envelopes that characterize helicopter operations in day time operations. In an effort to give helicopters the tactical and safety advantage of night operations, Herres and Brandt developed an independent, self-contained, non-radiating inertial navigation system for US Army H-37A helicopters. ⁵³

After graduating from AFIT in July 1960, Captain Herres received orders to the US European Command Electronic Intelligence Center (EIC) at Lindsey Air Station, West Germany.⁵⁴ During this assignment, Herres added to his repertoire of diversity by working in an engineer coded billet as a Technical

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⁵⁰ Captain Robert T. Herres and First Lieutenant Thomas C. Brandt, "An Analog Simulation and Analysis of an Inertial Navigation System for Helicopter Use" (Graduate Thesis Air Force Institute of Technology, 1960), ii.

⁵¹ Herres and Brandt, "An Analog Simulation and Analysis," ii.

⁵² Herres and Brandt, "An Analog Simulation and Analysis," 1-2.

⁵³ Herres and Brandt, "An Analog Simulation and Analysis", 1-2.

⁵⁴ General Herres, Official Biography, 3.

Intelligence Analyst. He estimated and analyzed technical data gathered from foreign military combat systems to develop intelligence reports. Herres received pictures of new Soviet Bloc radars or radio antennas and tried to determine their operational significance and what purpose they served. The intelligence effort at the EIC was a team effort, and Captain Herres' team included specialists from all the intelligence disciplines and Eastern European linguists. Additionally, Herres used information gathered from interviews of air attaches, defectors, and any others that he felt might be able to assist in figuring out the technical capabilities of the Soviet military equipment. Once Herres' team determined the operational significance and purpose of the radars, their field estimate was sent to the US for dissemination to all the US forces.

Herres developed valuable working and professional relationships with sister service counterparts during his three year duty in the EIC. He interacted daily with the Army and Navy personnel assigned to the EIC. This was his first joint experience beyond his attendance at USNA. Reflecting on his experience Herres said, "I went over there to that technical intelligence assignment as a captain. It was an organization that became joint while I was in it. It was originally the Air Force's Air Tech Intelligence Center for Europe, but then the Air Force got the job of putting together a joint US European Command Electronic Intelligence Center. So we got some Navy and Army folks assigned to us and we began to tighten up our relationship with the Army. We always worked closely with them, but now we had a formal relationship. This job was very revealing because we were working up operational estimates and they got to the joint headquarters, which was in Paris." The knowledge he gained on the sister service's combat requirements and on foreign military capabilities proved to be very valuable in his later career.

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⁵⁵ General Herres, interview, 10.

⁵⁶ General Herres, interview, 19.

⁵⁷ General Herres, interview, 23.

Even though Herres was serving in an intelligence capacity, the Air Force required staff pilots to fly a minimum of 100 hours per year for proficiency. 58 He flew the T-33 Shooting Star training aircraft out of Wiesbaden Air Base. To gain extra hours, Herres flew additional sorties on the weekends. He saw it as an opportunity to experience other parts of Europe, an opportunity not afforded through his duties as an intelligence analyst. From Herres point of view, the situation was a wonderful arrangement because he was able to partake in intelligence and operations at the same time.

In 1963, the Air Force faced a shortage of pilots and started a back-to-the-cockpit program. ⁵⁹ To match the requirements for back-filling pilots, the Air Force extended his European tour for one year and sent him to Chateauroux Air Base, France. At Chateauroux, Herres served as a standardization and evaluation pilot in the military training division. ⁶⁰ He ran the base flight training operation to help other pilots maintain their flying proficiency in the T-33. He performed check rides on pilots serving in staff billets and whose previous experience had been in other aircraft. ⁶¹ He had to decide whether to pass, recommend extra training, or fail pilots based on their performance in flying the T-33. In the event of recommending extra training or failure of his evaluates, Herres had to rely on his integrity and experience from USNA to do the right thing. ⁶² On occasion, making these decisions became difficult in situations where the evaluatee was a pilot that outranked him and did not agree with Herres' assessment.

After a year in France, Captain Herres was selected to attend the Air Command and Staff College (ACSC) at Maxwell AFB, AL, which also offered a supplementary evening program to earn a Master's Degree in Public Administration through the auspices of George Washington University

⁵⁸ General Herres, interview, 10.

⁵⁹ General Herres, interview, 10.

⁶⁰ History, 7322d Air Base Wing (USAFE), 1 January - 30 June 1964, 2.

⁶¹ General Herres, interview, 10.

⁶² Reef Points 2008-2009, 81.

(GWU). 63 To complete the George Washington program, Herres needed to report two weeks early, take evening courses concurrently with the ACSC courses, and stay a week longer after ACSC graduation to take the university's exams. Still, Herres felt it was too good of an opportunity to pass up. He elected to enroll in the Public Administration graduate program.

Herres received a pleasant surprise in June 1964 while en route to ACSC. The Air Force had promoted him to the grade of Major. The newly promoted Herres started ACSC with his usual academic curiosity. Herres did not approach ACSC as strictly an academic venue. He also looked at the ACSC experience as a great opportunity to network with old friends and other officers outside of his normal circle of acquaintances. The closest group of acquaintances for Major Herres during ACSC was his fellow group participants. At the time, ACSC leadership divided students into groups of twelve officers unofficially known as "Tables". The unofficial name "Tables" came from the tables placed in each classroom. 64

The concurrent ACSC and GWU academic requirements proved to be challenging for Major Herres. He found his GWU night classes were particularly challenging because the program was so concentrated. In order to award a graduate degree to ACSC students, GWU had to condense a two year program into one year. Despite the challenges, Herres did not feel the combination of the programs were as demanding as the Electrical Engineering program at AFIT. 65 He successfully completed the requirements for both programs and earned his second Master's Degree, this one in Public Administration.

GWU required their ACSC students to complete a thesis as part of the graduation requirements. Major Herres wrote his thesis on AF senior leadership development. 66 The thesis was inspired by "The Road Ahead," personnel management plan for Air Force officers developed by personnel

⁶³ General Herres, interview, 11.

⁶⁴ Hoover, interview.

⁶⁵ General Herres, interview, 11.

⁶⁶ Herres, "The Road Ahead'," ii.

planners at Air Force Headquarters. ⁶⁷ According to Herres, the plan divided "the force into manageable segments," but severely limited the "mobility of officers between career field groups." ⁶⁸ Herres thought that was the wrong approach and contrary to some principles of executive development—especially the need for a wide range of experiences—which were then universally accepted in broader society. Consequently, the purpose of his thesis became "to develop some executive training concepts specifically suited to the future needs of the Air Force, which could be integrated with the 'Road Ahead' plan for officer career management," and it was also consonant with the best practices of the civilian world. ⁶⁹ His work struck his contemporaries as a bit careerist, and perhaps it was, but to Herres it served as a mechanism to think logically about career progression.

In it, Herres recounted his past and chartered his future military career with his thesis. Major Herres recommended that a well prepared AF executive leader should be a person with the following repertoire: "experience in strategic bombers, tactical fighters and airlift operations; further, his education might include a bachelor's degree in engineering and a graduate degree in management or administration. This training should be integrated with command experience as well as with well rounded staff assignments in personnel, materiel and one or two other specialties. Though Major Herres did not then meet all his recommended criteria for Air Force senior leaders, he did accomplish most of them in his Air Force career.

Furthermore, in his thesis Herres argued the Air Force should adopt an executive development program that would provide senior leaders with the opportunity to nurture a broad set of necessary characteristics. These characteristics were: depth, breadth, technological understanding, historic knowledge, political awareness, creativity and imagination, communication skill, managerial skill, and, above all leadership. Herres posited the Air Force

⁶⁷ Herres, "The Road Ahead'," 2.

⁶⁸ Herres, "The Road Ahead'," ii.

⁶⁹ Herres, "The Road Ahead'," 5.

⁷⁰ Herres, "The Road Ahead," 1.

could provide for the development of these characteristics through a cohesive and consistent set of personnel policies which identified career opportunities for Air Force leaders.

Maj Herres used the "Constabulary Concept" developed by Morris Janowitz as a useful framework for constructing his thesis' proposed executive development program. Janowitz's concept asserted that the "constabulary force concept encompasses the entire range of military power and organization. At the upper end are the weapons of mass destruction; those of flexible and specialized capacity are at the lower end, including the specialists in military aid programs, in paramilitary operations, in guerilla and counter-guerilla warfare." Herres argued Janowitz's work suggested "a constabulary officer should develop greater military breadth, strategic perspective, and political-military awareness," all of which meant, for Herres, that officers should strive for "increased inter-service and inter-governmental mobility" throughout their careers. ⁷³

Herres also incorporated the opinion of Colonel Robert Ginsburgh, a faculty member at the US Military Academy, into his proposed executive development plan. Col Ginsburgh wrote, "The military profession requires the development of broad gauged military professionals who can speak with authority on a full spectrum of military matters rather than a collection of individual experts in air, land, and sea warfare. The more specialized expertise is still needed, but the military profession must also develop the generalists who can fuse together the particular competence of the specialists." In order to meet this challenge, Ginsburgh believed the military needed to: (1) develop an expertise which transcends that of the individual service; (2) develop strategy, tactics and techniques which can deal with the entire spectrum of organized conflict; (3) facilitate mobility among the services; (4) learn to

⁷¹ Herres, "The Road Ahead'," 56.

⁷² Morris Janowitz, The Professional Soldier (Glencoe, Illinois: The Free Press, 1960), 418.

⁷³ Herres, "The Road Ahead'," 57.

⁷⁴ Colonel Robert N. Ginsburgh, "The Challenge to Military Professionalism," *Foreign Affairs*, Vol. 42, No. 2 (January 1964), 263.

communicate effectively with the political decision maker; and (5) acquire a skill in mastering the techniques of operational research. From the teachings of Janowitz and Ginsburgh, it is easy to discern how Herres deducted the declarations in his thesis.

His seniors could have seen the assertions in Herres' thesis as hubris from a young major with no experience at the senior level of leadership. Herres recognized the development of these characteristics would depend on formal training, on-the-job experience, self-study, and supervisor mentoring. To Unsurprisingly, Herres developed the Air Force senior leader characteristics he wrote about in the remainder of his career by all of the means his thesis identified. Consciously or not, his ACSC thesis charted his career, both those years behind him and those in front of him.

Just before Major Herres graduated from ACSC in 1965, Shirley delivered their third child, Jennifer. With their three children, the Herres family was thankful the Air Force decided to keep them at Maxwell AFB for an additional year to teach weapons employment at the Warfare Systems School, a component of the Air University. The course Major Herres taught was just one of a number of short courses in curricula that covered subjects such as conventional and nuclear weapons employment, missile and space operations, and counter-insurgency. Herres taught a broad range of students from the active and reserve force, government service civilians, and defense contractors. Specifically, Maj Herres taught his students how to allocate weapons to targets, proper weapons selection, and techniques on how to estimate weapons effects. 77 Shirley Herres recalled her husband "really enjoyed instructing" because it was interactive and he believed he was good at it." 78 Major Herres' reporting official agreed, writing, "Major Herres has contributed more to the development of the non-nuclear weapons curriculum in the Weapons Employment Planning Course than any other individual. He created superior

⁷⁵ Ginsburgh, "The Challenge to Military Professionalism," 265.

⁷⁶ Herres, "The Road Ahead'," 105-106.

⁷⁷ General Herres, interview, 11.

⁷⁸ Shirley Herres, interview.

instructional periods on the characteristics of the weapons themselves and the interaction of weapon effectiveness, delivery mode, and target vulnerability."79

By the twelve year point Herres was already a well diversified officer. He started as a fighter pilot, continued as a maintenance officer, gained further breadth as an intelligence analyst, and rounded it out as an instructor at Air University. Educationally, he completed ACSC and earned two graduate degrees. Even his Master's degree choices demonstrated a mind set for diversity. He earned graduate degrees in Electrical Engineering and Public Administration. His early career accomplishments and experiences certainly set the conditions for continued diversity during the rest of his career.

 $^{^{79}}$ Field Grade Officer Effectiveness Report on Major Robert T. Herres, 12 June 1965 – 11 June 1966.

Chapter 2

Cultivating a Career of Breadth and Depth for an Air Power Leader

The leaders of the Air Force must have a depth of knowledge in their professional capacity as Air Force officers. This means a reasonably detailed understanding of the unique aspects of aerospace force employment. It is this depth which set the Air Force executive apart among his other military colleagues. He must know and understand the doctrines of his profession.

-Major Robert T. Herres.¹

In the spring of 1966 the Air Force asked for eligible volunteers to compete for billets in the Aerospace Research Pilot School (ARPS). The minimum requirements for ARPS entry were: a bachelor's degree in engineering, physical science, or mathematics; an application submitted before a person's 32d birthday and the course entered before the 33d birthday; and an active duty pilot in the grade of major or below, with a minimum of 500 hours as an instructor or first pilot in a fighter, bomber, or helicopter, or in a combination of these.² Major Herres easily met the ARPS eligibility requirements and decided to submit a package for selection. Herres survived the very competitive selection process and earned a position in the 1966-1967 ARPS class. Major Herres, Shirley, and their three children unexpectedly, but excitedly packed up and set off for yet another Air Force adventure at Edwards AFB, California, arriving in the middle of the July heat of the Mohave Desert.

ARPS trained experimental test pilots to supervise and conduct flight tests for research, experimental, and production-type aerospace vehicles; and trained research pilots for flight test, engineering design, and management for advanced aerospace research programs. The curriculum at ARPS consisted of two major phases. The first phase, Experimental Test Pilot Course, was eight months in duration. It consisted of academic and flight portions covering two

¹ Major Robert T. Herres, "The Road Ahead' and Air Force Executive Development," (Maxwell Air Force Base, Alabama: Air Command and Staff College, June 1965), 69.

² Major Donald J. Kutyna, "The Aerospace Research Pilot School," Air University Review, November – December 1969, 82.

major segments of flight testing; performance, and stability and control.³ Major Herres found this phase to be challenging but manageable since he was already an experienced pilot. Toward the latter part of this phase, Herres was promoted to Lieutenant Colonel. As he always did, he attributed his promotion to God, family members, and all those he worked with presently and in the past. He made no mention or even hinted that he achieved this milestone on his own.⁴ Shirley Herres commented, "This was not something Gen Herres did because he thought it was obligatory, for him it was truly heartfelt.".⁵

Lieutenant Colonel Herres found the second phase, Aerospace Research Pilot Course (ARPC), much more challenging. Most of the academics and instruction in this phase was new to Herres. Furthermore, ARPS condensed the course into a short three and a half month block. The phase included academic and flight portions covering four ARPS major segments of aerospace flight testing: classroom instruction on performance and operation of advanced aircraft and space vehicles; flights to experience the characteristics of research aircraft and manned space vehicles; physiological and psychological familiarization of high-performance and space flight; and site visits to facilities involved in advanced aircraft, space vehicles, and related systems and components.⁶

Throughout his ARPS training, Herres had to report clearly and accurately his findings from each test flight. He found this to be the most tedious yet one of the most necessary parts of the curriculum. He strived to improve his written and oral reports with each mission. This experience served as a great honing opportunity for his writing and speaking abilities. It was also a manifestation of an assertion made in his GWU thesis, where he had written the "military executive...must be able to communicate effectively with his colleagues and subordinates in order to train, teach, and transmit his ideas

³ Kutyna, "The Aerospace Research Pilot School," 82.

⁴ Shirley Herres (Widow of General Herres), interview by author, 29 January 2009.

⁵ Shirley Herres (Widow of General Herres), interview by author, 3 June 2009.

⁶ Kutyna, "The Aerospace Research Pilot School," 86-87.

and knowledge." These skills proved invaluable to him in every stage of his ensuing career. Herres found that all his writing and speaking challenges in his early career better prepared him to present his vision to subordinates, peers, supervisors, civilian and world leaders.

When the 1966-1967 class checked into ARPS, the commandant informed them that four qualified individuals would get the opportunity to be astronaut candidates in the AF Manned Orbit Laboratory (MOL) Program.⁸ The Air Force developed the MOL Program as a result of President Eisenhower's mandate to cease over flights of the Soviet Union.⁹ Eisenhower made this decision to minimize further political tensions between the US and the Soviet Union after Francis Gary Powers and his U-2 had been shot down over Soviet territory.¹⁰ To continue intelligence, reconnaissance, and surveillance missions over the Soviet Union and abide by President Eisenhower's mandate, the AF developed the MOL Program.¹¹ The opportunity to become an astronaut in the MOL Program intrigued Herres and he decided to compete for one of the slots.

Lt Col Herres' composed and exceptional performance during ARPS earned him a slot as one of the four astronaut candidates selected for the MOL Program. Herres and the other three candidates joined thirteen other astronauts previously selected for the MOL Program, bringing the total to seventeen pilots. ¹² The seventeen AF pilots trained and operated in a veil of secrecy. The AF ran MOL as a highly classified program because of the obvious political sensitivity between the US and Soviet Union. The Department of Defense (DOD) publicly stated the purpose of the AF MOL Program was to conduct space experiments with the goal of gaining knowledge of what man can

⁷ Herres, "The Road Ahead'," 71.

⁸ Military pronunciation of MOL is "mole". Shirley Herres, interview.

⁹ James Bamford and C. Scott Willis, *Astrospies*, A NOVA production, 56 min., 2008, DVD.

¹⁰ Francis Gary Powers and Curt Gentry, *Operation Overflight: A Memoir of the U2 Incident* (Washington, DC: Brassey, Inc., 2004), 113.

¹¹ Bamford and Willis, Astrospies.

¹² Timothy C. Hanley and Harry N. Waldron, *Historical Overview: Space & Missile Systems Center*, 1954-1995 (Los Angeles, CA: SMC History Office, 1996), 29.

do in space. In actuality, the Herres, "The Road Ahead'," 71.MOL mission was an orbital spy program utilizing a sophisticated camera the size of a car with three inch resolution to conduct strategic intelligence missions over the Soviet Union. ¹³ The intelligence collected on the Soviet Union consisted of taking pictures of high priority targets such as military bases and equipment. The MOL missions would entail sending a crew of two astronauts to near earth orbit in a Gemini capsule for thirty days to operate the camera for intelligence collection. ¹⁴

The training for MOL included flying in the morning, classes in the afternoon, and studying at night. Herres received extensive academic instruction on astronomy, bioastronautics, space environment and flight mechanics, and atmosphere re-entry. The MOL training process proved physically and mentally demanding for all the astronauts as they were subject to extensive medical examinations, physiological testing, and psychological prodding. ¹⁵ Considering all the requirements and demands for astronaut candidates, Herres composed character sustained him in managing the stressful environment.

The MOL program tasked Herres with demanding flight profile and space vehicle simulation requirements. Probably the most demanding of the flight profiles was the F-104 and NF-104 "zoom missions". ¹⁶ In the NF-104 zoom mission profile, Herres took off using a forty degree climb angle to reach maximum altitudes between 100 and 110 thousand feet. Then he descended to accomplish a low lift-to-drag ratio pattern and landing. The zoom sorties simulated space craft and lift-body flight characteristics. Additionally, the zoom sorties exposed Lt Col Herres to "zero gravity, pressure suit survival,"

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¹³ Bamford and Willis, Astrospies.

¹⁴ Hanley and Waldron, Historical Overview: Space & Missile Systems Center, 1954-1995, 29.

¹⁵ Bamford and Willis, Astrospies.

¹⁶ The NF-104 Aerospace Trainer is a modified F-104 Starfighter. The modifications include a rocket engine, extra wingspan, larger tail, reaction control jets in the wingtips and nose, and a reaction jet controller in addition to the center stick. Kutyna, "The Aerospace Research Pilot School," 89.

rocket propulsion, reaction control handling, energy management, and variable stability." ¹⁷

The MOL used a Titan III booster rocket to launch a Gemini capsule attached to the MOL into near earth orbit. ¹⁸ To train the astronauts in the high to zero gravity operations, the training program included 15g profiles in the centrifuge and zero gravity flights in a C-135 zero gravity aircraft. Additionally, the MOL training program utilized underwater training to simulate zero gravity spacecraft critical tasks. Astronauts dawned scuba gear and a full space suit to practice moving exposed film packages from the laboratory to the Gemini capsule. ¹⁹ This ensured the exposed film did not get damaged during the transfer from the laboratory to the Gemini capsule. This exercise taught astronauts how to control their body movements in a zero gravity environment.

As the program matured, the MOL mission expanded to include missions of firing projectiles to neutralize other satellites, encapsulating and recovering objects from space, and changing the orbital trajectory of Soviet Union satellites. Unfortunately, the expansion of the MOL missions caused delays in development timelines due to increased costs and changes in launch site and vehicle requirements. ²⁰ As a result, the DOD canceled the MOL program on 10 June 1969 because of the high projected costs and advances developed by the National Reconnaissance Office in unmanned satellites with the same capabilities as MOL. ²¹

Upon cancellation of the MOL Program, the Air Force put a two-year "combat restriction" on the pilots returning to fly in the regular Air Force. ²² This restricted MOL pilots from participating in Vietnam immediately after leaving the highly sensitive program. The Air Force wanted to avoid the possibility of the North Vietnamese handing over former MOL pilots to the

¹⁷ Kutyna, "The Aerospace Research Pilot School," 87-90.

¹⁸ Hanley and Waldron, Historical Overview: Space & Missile Systems Center, 1954-1995, 29.

¹⁹ James Bamford and C. Scott Willis, Astrospies.

²⁰ Hanley and Waldron, Historical Overview: Space & Missile Systems Center, 1954-1995, 29.

²¹ James Bamford and C. Scott Willis, Astrospies.

²² Major General William Hoover (USNA Class 1954), to the author, email, 10 April 2009.

Soviets for interrogation in the event of capture. In effect, the Air Force restriction dashed Lt Col Herres' possibilities of becoming a combat squadron commander. This was devastating to Lt Col Herres because he knew the Air Force valued squadron command and combat experience highly when considering promotions to Colonel.

Nevertheless, Lt Col Herres received orders to report to the Air Force Flight Test Center (AFFTC) at Edwards AFB, California in August 1969. There, he served as the Plans and Requirements Deputy Chief of Staff (DCS). This job required a lot of interaction with the AFFTC Wing Commander's Staff, 6511 and 6512 Test Groups, and project contractors. The primary test programs during Lt Col Herres tenure included the A-7D Corsair II, the FB-111A Aardvark, the C-5A Galaxy, and the AIM-4H Falcon air-to-air missile. ²³ Herres found the job fun but challenging and said, "I learned about scheduling, money, and the importance of interpersonal communications." ²⁴ He earned a promotion to Colonel in November while fulfilling the duties of DCS.

As the DCS, Col Herres processed all requests for test, support, and other programs. ²⁵ Herres prepared and disseminated comprehensive flight test directives to all AFFTC units involved. Each directive included a background discussing the purpose of the flight test, scope, schedule, implementation required, and authority. ²⁶ During his tenure as the DCS, he published 75 project directives and 11 changes to those directives. He authorized the expenditure of resources and established priorities, responsibilities, and procedures for conduct or support of all AFFTC programs. ²⁷ His most important duty was representing the AFFTC when giving briefs to senior Air Force leaders, sister service senior leaders, government contractors, and congressional delegations. During this time in the Air Force, selection for a major command's briefing team usually indicated a commander's confidence in

²³ History, Air Force Flight Test Center, 1 July 1969 – 30 June 1970, 45.

²⁴ General Robert T. Herres, interview by Paul Ringenbach, 4 January 1995, transcript, 44, Mrs. Shirley Herres, Lincoln, NE, 12.

²⁵ General Herres, interview, 12.

²⁶ History, Air Force Flight Test Center, 1 July 1969 – 30 June 1970, Appendix E.

²⁷ History, Air Force Flight Test Center, 1 July 1969 – 30 June 1970, 45.

a subordinate's potential for further advancement in rank. In Herres' case, this turned out to be true. His early briefing experiences served him well throughout the rest of his career, especially when Herres briefed the Joint Staff, Congress, and the National Security Council as a senior Air Force leader. In his performance of duties as the DCS, Herres exemplified another claim he made in his GWU thesis: "An understanding of the technology of science must be developed in Air Force leaders, which permits them to recognize, evaluate, and exploit the ever changing means for waging war. He must be prepared to insure that the discovery and development of these means are not left to chance." ²⁸

In his final AFFTC officer effectiveness report, Colonel William W. Gilbert recommended Herres for an assignment to the Air Staff as a staff officer in plans. The Wing Commander, Brigadier General Alton Slay, did not agree with Col Gilbert's recommendation. Slay saw a major weakness in Herres' record; he had no command experience even though he was a colonel. Consequently, Brig Gen Slay recommended Herres for a Deputy Commander for Operations job in a tactical fighter wing with the expectation that he would progress to wing command shortly after. ²⁹

Instead, the Air Force selected Colonel Herres to attend the Industrial College of the Armed Forces (ICAF) at Fort McNair in Washington, DC for the 1970-1971 academic year. At ICAF, in lieu of doing a thesis, the faculty asked Herres to join a team of three other students to author a "Blue Book" on military space operations. ³⁰ Herres felt this to be too good of an opportunity to pass up so he accepted the offer to co-author the book. With little guidance from the faculty, the "Blue Book" team developed a chapter outline of logical

²⁸ Herres, "The Road Ahead'," 70.

²⁹ Officer Effectiveness Report on Colonel Robert T. Herres, 26 July 1969 – 9 June 1970.

³⁰ In addition to the in-residence program, ICAF had a correspondence program. The curriculum for the correspondence course included approximately 25 volumes of textbooks called "Blue Books" for student instruction. Unfortunately, ICAF did not have faculty members with the experience or expertise to write a "Blue Book" on space during the 1970-1971 academic year. So the faculty turned to the students with space experience to write the textbook for the correspondence program. General Herres, interview, 21.

space topics to cover and assigned two chapters to each team member. The coauthors exchanged chapter outlines so everyone knew exactly what each person planned on writing. They helped each other through the conceptualization stage and rough drafts. The finished product gave a comprehensive overview of the organization and management of the US space programs.³¹ The "Blue Book" explained the essential developments in the technological and scientific aspects of US space programs.³² Col Herres was very proud of his team's accomplishment and hoped it would serve its intended purpose well.

Since ICAF was Col Herres' first assignment in the nation's capitol, he wanted Shirley and his children, who were in junior high school at this time, to spend time touring the historic sites and experiencing the cultural aspects of Washington. To aid in maximizing his family time, Herres set a personal goal to complete his assigned chapters of the book by the end of the first semester. He worked on his portion of the book eight hours a day during the first semester to realize his goal. Herres finished his two chapters by the end of the Christmas Holidays. Consequently, Col Herres and his family had time to experience DC together during the second semester of ICAF.

The ICAF academic year had lasting impressions for Col Herres. Even though Herres gained joint experience in his previous job as an intelligence analyst, he believed ICAF helped him learn more about the other service's roles, responsibilities, and expectations of the Air Force. Furthermore, he felt he learned as much from the other students as he did from the faculty and guest lecturers. Herres believed you could learn as much from other people's experiences as you could from reading textbooks.³³

Surprisingly, after graduating from ICAF in June 1971, the Air Force decided to assign Col Herres to the 449th Bombardment Wing (Heavy) at

³¹ Colonel Robert A. Foster et al., *National Security Management: National Aerospace Programs* (Washington, DC: Industrial College of the Armed Forces, 1972), iii.

³² Foster, National Security Management: National Aerospace Programs, iii.

³³ General Robert T. Herres, "Guidelines for Leadership" (lecture, Air Command and Staff College, Maxwell AFB, AL, 4 June 1985).

Kincheloe AFB, Michigan to serve as the Vice Wing Commander. This assignment surprised Col Herres because the Strategic Air Command (SAC) had a legacy of hiring their wing leadership from within the command. In other words, one had to grow up in SAC to become a senior leader in SAC and up until this moment in his career, Col Herres did not have experience in SAC.

This opportunity had transpired because the SAC Commander, General Bruce Holloway, decided bringing "new blood" to the command was necessary to populate and improve his bomb wings during the dynamic flux of the Vietnam War. During Vietnam, Colonels in SAC had transferred in and out of Southeast Asia to fill command requirements supporting the war effort. This state of flux caused leadership shortages within SAC. To fill these leadership positions, Gen Holloway purposefully sought Colonels who had broadened their early careers in order to bring different perspectives within SAC. Gen Holloway knew the value of different perspectives first hand since he also spent his early career in the fighter community and then transferred to SAC. Col Herres' early career development fulfilled the requirements for this opportunity and managed to mitigate the negative influence of his lack of command experience because this assignment eventually led to a SAC wing command.

Herres' transition to SAC was not without turbulence. He faced animosity from members within his old and new commands. Herres certainly took a ribbing for the major command transfer from his fighter pilot mentors and peers. This ribbing was not without cause. At this point in the Air Force, the senior positions on the Air Staff and major commands were beginning to be populated by fighter pilots. This was due to fighter wings doubling in size by 1965 and SAC wings considerably reducing in the same time frame. This was a major turn in the tide for the previously SAC dominated Air Force. It was for this reason Herres' fighter pilot peers and mentors encouraged him to stay in the Tactical Air Command (TAC) for future

³⁴ Shirley Herres, interview, 29 January 2009.

³⁵ Colonel Mike Worden, *Rise of the Fighter Generals: The Problem of Air Force Leadership*, 1945-1982 (Maxwell Air Force Base, AL: Air University Press, 2007), 187.

leadership positions.³⁶ The careerists in SAC also saw the changing of the guard as unsettling. It was unsettling to them because SAC officers started to feel the ramifications of change by losing out on promotions as a result of the outsiders taking the command billets.³⁷ This turning of the tide was due to the fighter pilot community's broadening mission and its ability to develop more creative leaders as a result of extensive combat time in the Vietnam War, something SAC could not claim to the same extent.³⁸ The situation for SAC Airmen was further exasperated by the Air Force's increasing desire for career diversity in their future leaders. This commodity was sought by Air Force senior leaders because of the noticeable "presence of more pluralistic and pragmatic views" in such Airmen.³⁹ Regrettably, this was not the mold SAC had cast for their cohorts for at least a generation. Despite SAC's impending downfall, Col Herres' composure and ability to communicate his reasoning for switching major commands helped appease his mentors from TAC, who originally thought his decision was a career killer.

Col Herres did not enter into SAC without preparation or senior leader guidance. A born and raised SAC warrior, Brigadier General Eugene Hudson, took him under his wing. ⁴⁰ Brig Gen Hudson commanded the 40th Air Division which was the commanding organization for the 449th BW. Brig Gen Hudson considered it a challenge and his job to get the young Vice Commanders, with little or no prior SAC experience, ready to command SAC wings. He taught his fledgling Vice Commanders the nuisances and ways of SAC. Herres remembered Hudson as "a great mentor and he had high standards. He was a tough cookie to work for. You would have thought he stepped out of that movie

³⁶ Major General William Hoover, interview by author, 23 March 09.

³⁷ General Herres, interview, 24.

³⁸ Worden, Rise of the Fighter Generals, 191.

³⁹ Worden, Rise of the Fighter Generals, 213.

⁴⁰ Major General Eugene L. Hudson started his Air Force career as a B-29 pilot during WWII. He served the majority of his career after WWII in Strategic Air Command. Reference his official AF biography to learn more about his contributions to SAC at http://www.af.mil/bios/bio.asp?bioID=5871.

Rock Hudson made. The real officer Hudson could have played that role better than Rock Hudson did.".⁴¹

En route to his new assignment, Col Herres stopped at Castle AFB, California to attend the 93d Bomb Wing replacement training unit course. Herres spent two weeks with the 93d to complete ground training in the B-52 Stratofortress and KC-135 Stratotanker. During this time, SAC qualified their crews in the B-52 and KC-135. He then continued to Kincheloe AFB to complete the flying portion of the qualification process. Considering the necessity for qualifying in multiple aircraft during his ARPS experience, qualifying in two more aircraft was nothing but old hat for Herres.

When Col Herres checked into the 449th BW, Colonel Kenneth M. Holloway was the commander. Col Herres' job was to support Col Holloway in carrying out the 449th Wing's mission with fifteen B-52H bombers and fifteen KC-135 tankers. The two main components of the 449th mission were to support the ongoing war in Vietnam and continue the strategic mission of deterrence against the Soviet Union. As part of the Vice Wing Commander's duties, Col Holloway charged Herres to focus on increasing the morale of the personnel assigned to the 449th BW. This focused responsibility was due to a statement made about low morale during the April through June 1971 evaluation period. Col Holloway wanted the situation addressed and improved immediately. Accordingly, Col Herres asked the base chaplain to accomplish an appraisal of the moral in the wing. 42

Chaplain V. J. Meerdink discovered the morale evaluation conducted during the April – June 1971 period was purposefully misrepresented and reported by a disgruntled evaluator. The results of the morale evaluation were found to be the opinion of the individual evaluator and not the reflection of the collective group of 449th BW Airmen. Despite this encouraging finding, Chaplain Meerdink did note the 449th BW leadership did have an "up-hill" challenge to improve morale considering "the base's isolated geographic

⁴¹ General Herres, interview, 20, 25.

⁴² History, 449th Bombardment Wing, July - September 1971, exhibit 31, 1.

position, extended winters, limited means of transportation, and dubious military-civilian community relationships." 43

After Chaplain Meerdink's appraisal, Col Herres knew where the wing stood and he developed a plan to improve the morale of his Airmen. To help Herres reach this goal, the 449th received a \$155,324 increase in organizational and maintenance funds from the 40th Air Division Headquarters to improve airman's dormitories, recreational facilities, and other facilities frequented by base personnel. 44 Additionally, Col Herres began programs to improve interpersonal and military-civilian relationships. Herres initiated these programs to improve the base's relationship with the local community since his Airman had several less than favorable incidents when frequenting local establishments during their off duty hours. To show his commitment to improve relations with the local population, Col Herres volunteered a KC-135 and a B-52 from the wing to fly two low-level passes over Sault Ste. Marie, Michigan during an American Legion Parade. Herres also used a base fire engine and a mock-up of the BOMARC missile from the 37th Aerospace Defense Squadron as static displays for the locals to enjoy. Consequently, the community invited Col Herres to be a member of the parade as an honored guest. 45 As a result of his efforts, the morale evaluation for the next quarter increased to "fair and improving," and the base's standing with the local population grew substantially. 46 The morale situation validated the lessons Herres learned about leadership in his earlier career. He saw firsthand how a commander must take care of his people and in turn the people will take care of the mission. Herres carried this lesson with him throughout the rest of his career.

Col Herres became the acting commander of the 449th BW on 12 April 1972 when Col Holloway received orders for a six month temporary duty

⁴³ History, 449th Bombardment Wing, July - September 1971, 50, exhibit 31, 3.

⁴⁴ History, 449th Bombardment Wing, July – September 1971, 2.

⁴⁵ History. 449th Bombardment Wing, April – June 1972, 4.

⁴⁶ History, 449th Bombardment Wing, October – December 1971, 6.

assignment to Anderson Air Base, Guam. ⁴⁷ This increased responsibility came much sooner than Col Herres expected, especially since the 449th BW was experiencing a high operations tempo due to Vietnam War commitments. In support of the Vietnam War effort, the 449th BW was tasked to provide crews for ARC LIGHT, YOUNG TIGER, and COMMANDO ELITE missions. During ARC LIGHT missions, the 449th BW sent B-52 crews and aircraft to Anderson AB, Guam and U-Tapao Royal Thai Navy Airfield, Thailand in support of the bombardment campaign against North Vietnam. During the YOUNG TIGER missions, the 449th BW sent KC-135 crews and aircraft to U-Tapao AB, Thailand in support of the air refueling mission for the Southeast Asia air operations. ⁴⁸ During the COMMANDO ELITE missions the wing KC-135's ferried fighter aircraft to Hickam AFB, Hawaii. The fighter aircraft would later continue to Southeast Asia to fight in the war.

Additionally, Col Herres led the wing in missions that were not in direct support of the Vietnam War. His crews took part in the Spanish and Eielson Tanker Task Forces, BUSY SKYSPOT, and BURNING PIPE mission. As a part of these tanker task forces, 449th BW KC-135 aircraft and crews deployed to support air refueling operations over Europe and Alaska. During the BUSY SKYSPOT missions, 449th B-52s assisted in training forward air controllers. In these missions, B-52 crews dropped conventional bombs, known as "Iron Bombs", while directed by a forward air controller. ⁴⁹ During the BURNING PIPE missions, 449th KC-135s flew air refueling missions for SAC reconnaissance aircraft conducting worldwide intelligence collection. ⁵⁰ All these missions, along with the Vietnam War effort, kept Col Herres dutifully employed during his boss' absence.

Col Holloway returned to Kincheloe AFB from Anderson AB in October and received orders to SAC Headquarters shortly thereafter. As a result, Col Herres took command of the 449th BW during formal ceremonies presided over

⁴⁷ History, 449th Bombardment Wing, April – June 1972, 2.

⁴⁸ History, 449th Bombardment Wing, October – December 1972, 18-19.

⁴⁹ History, 449th Bombardment Wing, January - March 1972, 40.

⁵⁰ History, 449th Bombardment Wing, October – December 1972, 22.

by Lieutenant General James M. Keck (2nd Air Force Commander), on 27 November 1972. ⁵¹ This was Col Herres first official command since joining the Air Force. Considering his performance over the previous six months, Lt Gen Keck had great trust and confidence in Herres' ability to lead the 449th BW.

Soon after taking command, Col Herres experienced one of the most difficult circumstances of any flying unit commander. One of his 449th BW assigned B-52 crews crashed over North Vietnam on 26 December 1972. ⁵² The North Vietnamese had shot sixty-eight surface-to-air-missiles (SAM) that night, resulting in two downed B-52s. ⁵³ Surprisingly, there were not more losses considering there were 120 bombers and 113 support aircraft in a small piece of sky that night. ⁵⁴ One of the two ill-fated bombers was owned by Herres, crew E-21, commanded by Captain Robert J. Morris. ⁵⁵

Immediately after finding out about the incident, Col Herres and Shirley went to visit each of the crewmember's spouses. Col Herres shared the information he knew about the event with the families and offered them comfort through prayer. Col Herres, in good faith, prayed with each of the families in hopes of a safe return by the B-52 crewmembers. In addition to Morris, the crew onboard included Capt. Michael H. LaBeau, Capt. Nutter J. Wimbrow III, 1LT Robert M. Hudson, 1LT Duane P. Vavroch, and SGT James R. Cook. ⁵⁶ After Captain Morris had given a bail-out order, the crew of the aircraft parachuted to safety. However, LaBeau, Vavroch, Hudson and Cook were captured by the North Vietnamese immediately after the bailout. ⁵⁷ These four spent the next six weeks in the Hanoi prison system. ⁵⁸ Ultimately, they were released by the Vietnamese Government in Operation Homecoming on

⁵¹ History, 449th Bombardment Wing, October – December 1972, 2.

⁵² History, 449th Bombardment Wing, October – December 1972, 19.

⁵³ Jeffrey D. Glasser, *The Secret Vietnam War: The United States Air Force in Thailand*, 1961-1975 (Jefferson, NC: McFarland and Company, Inc., 1995), 139.

⁵⁴ Glasser, The Secret Vietnam War: The United States Air Force in Thailand, 1961-1975, 139.

⁵⁵ History, 449th Bombardment Wing, October – December 1972, 19.

⁵⁶ History, 449th Bombardment Wing, October - December 1972, 19.

⁵⁷ P.O.W. Network, "Biographies on Prisoners of War and Missing in Action (POW/MIA) from the Vietnam Conflict: Captain Robert J. Morris, Jr.," http://www.pownetwork.org/bios/m/m191.htm (accessed 20 May 2009).

⁵⁸ P.O.W. Network, "Biographies on Prisoners of War and Missing in Action (POW/MIA)."

February 12, 1973.⁵⁹ Unfortunately, there was not a happy ending for Morris or Wimbrow. The Vietnamese Government denied any knowledge of the two until four years later when, in late September 1977, the Vietnamese returned the remains of Morris and Wimbrow to U.S. authorities.⁶⁰

Col Herres soon experienced commanding Vietnam combat missions firsthand. Col Herres received temporary duty orders to U-Tapao AB, Thailand and took command of the 310th Strategic Wing (Provisional) on 23 March 1973 in support of Operations YOUNG TIGER and COMBAT LIGHTNING. Herres flew thirty-seven KC-135 and six B-52D combat missions from March through August 1973 during this operation. Herres flew his B-52D combat missions with the 307th Strategic Wing, which was co-located with the 310th at U-Tapao AB.

The 310th SW's mission was to provide air refueling to aircraft in Southeast Asia. The Air Force created the provisional units at U-Tapao to support the increased air operations surge during most of 1972-1973. ⁶² The KC-135 missions were affectionately known as "gaggles" amongst the Airman in Southeast Asia. The gaggles were preselected orbits designated by names of colors. The orbits contained six over-land tracks in Northern Thailand and two over-water tracks above the Gulf of Tonkin. Tanker crews planned for missions to service sixteen aircraft in the duration of one sortic. ⁶³ Besides the primary mission of providing air refueling, the wing flew other Department of Defense directed sorties such as Force Logistics Support, search and rescue, tanker deployment and redeployment, and ferry missions. ⁶⁴

Again, Col Herres found the most challenging aspect of his command to be the morale of his personnel. He used several indicators to monitor the morale of the wing and measure how well the men accomplished the mission. Herres assessed the mission effectiveness rate, the tail number substitutions,

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⁵⁹ P.O.W. Network, "Biographies on Prisoners of War and Missing in Action (POW/MIA)."

⁶⁰ P.O.W. Network, "Biographies on Prisoners of War and Missing in Action (POW/MIA)."

⁶¹ Officer Military Record on Colonel Robert T. Herres, Air Force Form 11, 7 February 1974.

⁶² History, 310th Strategic Wing (Provisional), 1 April – 30 June 1973, 3.

⁶³ Glasser, The Secret Vietnam War: The United States Air Force in Thailand, 1961-1975, 139.

⁶⁴ History, 310th Strategic Wing (Provisional), 1 April – 30 June 1973, 2.

the number of personnel on "duties not including flying" status, and simply listened to any 310th SW member who had a complaint during his weekly one hour "open door sessions". ⁶⁵ His willingness to listen to his troop's point of view showed he valued the significance of communication.

As a result of the 15 August 1973 ceasefire between North and South Vietnam, Herres began to have concerns that the morale of his Airmen would deteriorate slightly because of the reduced sortic requirements. ⁶⁶ Col Herres' intuition turned out to be wrong due in large part to his actions in lead turning the potential morale problem. Herres wrote a recommendation letter to the 17th Air Division Commander (17th AD/CC) as a result of the ceasefire agreement. Herres requested a crew reduction from eighty-seven to fifty-two crews in order to produce the maximum sortic rate with the minimal amount of crews. ⁶⁷ The 17th AD/CC approved the request and authorized a further reduction to forty-six crews. ⁶⁸ The sortic requirements for the period after the ceasefire agreement was sufficient to generate approximately twenty sorties daily in support of reconnaissance missions, refueling training for B-52 crews, and tactical aircraft. ⁶⁹ This sortic rate kept the remaining fifty-two crews busy enough to keep out of trouble. ⁷⁰

After initiating the drawdown of KC-135 crews at the 310th SW, Col Herres ended his tour in Southeast Asia on 9 September 1973.⁷¹ Three months after his return to the 449th BW, the Air Force selected him for promotion to Brigadier General. The day after his official promotion announcement, he received an assignment to SAC Headquarters at Offutt AFB,

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 $^{^{65}}$ "open door session" data from History, 310^{th} Strategic Wing (Provisional), 1 July – 31 December 1973, 17-18. All other data from History, 310^{th} Strategic Wing (Provisional), 1 April – 30 June 1973, 9-10.

⁶⁶ History, 310th Strategic Wing (Provisional), 1 July – 31 December 1973, 15.

⁶⁷ History, 310th Strategic Wing (Provisional), 1 July – 31 December 1973, exhibit 16.

⁶⁸ History, 310th Strategic Wing (Provisional), 1 July – 31 December 1973, 14.

⁶⁹ History, 310th Strategic Wing (Provisional), 1 July – 31 December 1973, 15.

⁷⁰ History, 310th Strategic Wing (Provisional), 1 July – 31 December 1973, 14.

⁷¹ Colonel Robert T. Herres, Citation to Accompany the Award of the Bronze Star Medal, 9 September 1973.

Nebraska as the Director of Command and Control. 72 The promotion to Brig Gen signified the transition between his intermediate career and senior Air Force career. During Herres' first command experiences, his only shortcoming came in striking a balance in the relationship between operations tempo and maintenance schedules. His maintainer's morale began to lag due to the extra hours being worked to keep up with the flight operations. 73 This oversight could be attributed to the lack of experience as a squadron or group commander before taking on the responsibilities as a wing commander.

The extensive training in ARPS and the MOL Program presented him with the chance to diversify into space operations. His attendance at ICAF helped him learn more about the other service's roles and responsibilities in joint operations, and his educational experiences gave him a perspective of what the other services expected of the Air Force in the joint arena. More importantly, Herres developed relationships with sister service students at ICAF that paid dividends in his future. His experience as wing commander for the 449th BW and 310th SW provided him the opportunity to diversify into bomber and tanker combat flight operations. It also served as an example of how he fulfilled another assertion in his ACSC thesis, "Above all else, the Air Force executive is a leader of men. This is the highest of the military arts and is all the more difficult as it is often performed in an environment of physical danger. The management role does not detract from the need for the leadership art since, by definition, the resources employed by the manager include men."74 Lastly, he learned that leading an Air Force wing required an extensive understanding of how to deal with morale, manning, and budgeting. Combining all his midcareer experiences with his early career diversity distinctly cultivated a breadth and depth that would shape his performance as a senior leader.

⁷² General Herres, interview, 14.

⁷³ History, 449th Bombardment Wing, January - March 1974, 29.

⁷⁴ Herres, "The Road Ahead'," 71-72.

Chapter 3

The Magnum Opus of Diversity

Leadership is not something you can learn and then go execute; rather it is something to be lived and wrestled with everyday. Leadership is a constant learning experience that is wholly individualized and very much a problem of adapting one's attributes and accounting for one's weaknesses to the situations encountered.

- General Robert T. Herres.¹

General Herres' well rounded early and intermediate career primed him for success while serving in subsequent senior leadership positions. Herres' experiences gave him the penchant to transcend service parochialism and effectively integrate air and space power in support of the US National Security Strategy. His service as the Joint Chiefs of Staff (JCS) Director of Command, Control, and Communication (C³); Commander in Chief (CINC) of US Space Command; and Vice Chairman of the Joint Chiefs of Staff (VCJCS) show-cased the value of his early career diversity. Herres capitalized on these previous experiences to help develop a strategic vision and a distinctive leadership style while serving in each of these three key military positions.

In between his assignments as the 449th Bomb Wing Commander and JCS C3 Director, Herres held five Air Force specific senior leadership positions. He served as the C² Director at SAC from 1974-1975, Security Assistance Programs Deputy Commander from 1975-1977, Headquarters Air Force C³ Director from 1977-1979, Air Force Communications Command Commander from 1979-1981, and Eighth Air Force Commander from 1981-1982. Though Gen Herres excelled at each of these jobs, they only obliged him to focus mainly on Air Force policies and requirements. He rarely relied on his early career diversity experiences to meet the challenges in these jobs.

¹ General Robert T. Herres, "Guidelines for Leadership" (lecture, Air Command and Staff College, Maxwell AFB, AL, 4 June 1985).

² Ronald H. Cole et al., *The Chairmanship of the Joint Chiefs of Staff* (Washington, DC: Joint History Office, 1995), 161.

Lieutenant General Herres served as the JCS Director of C³ from October 1982 to July 1984.³ In this capacity, Lt Gen Herres was responsible to the Chairman of Joint Chiefs of Staff (CJCS) for the planning, programming, and budget oversight for C³ of all the military services.⁴ This was not an easy endeavor considering President Reagan's strategic military program included a five-year \$31 billion budget to improve and expand the US C³ network that controlled the nation's strategic nuclear forces.⁵ Managing a budget was not a new experience for Lt Gen Herres since he previously made budget decisions as the 449th and 310th wing commander.

As the JCS Director of C³, Lt Gen Herres worked service requirements on Capitol Hill. Herres regularly defended C³ requirements for all the services before the Secretary of Defense (SecDef) and Congress. During these occasions, Lt Gen Herres' valuable communication skills paid many dividends. His ability to articulate clearly the US, military services, and Unified and Specified Command CINCs' C³ requirements often garnered approval from his audiences. Moreover, in order to implement the US C³ plan and budget, Lt Gen Herres worked extensively with the services to address their C³ requirements. From his past joint experience in the EIC and military education, Herres understood how the joint system worked. He acted as an honest broker to prioritize each of the service and CINCs' C³ requirements. Lt Gen Herres coordinated service and CINC proposals for congressional funding approval and allocated funds to approved projects. 6 This was not an easy process considering the importance of C³ systems for all military operations. Inevitably, Herres had disgruntled senior military and civilian leaders because there simply was not enough money to fund all the US C³ requirements despite a \$31 billion budget.

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³ Cole et al., *The Chairmanship of the Joint Chiefs of Staff*, 157.

⁴ General Robert T. Herres, interview by Paul Ringenbach, 4 January 1995, transcript, 44, Mrs. Shirley Herres, Lincoln, NE, 24.

⁵ William Arkin and Peter Pringle, "C³I: Command Post for Armageddon," *The Nation*, April 1983, 434.

⁶ Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 7401.02D, Combatant Commander Command and Control Initiatives Program, 31 October 2007, A-1.

To add to the challenges for Lt Gen Herres, strategic C³ was often characterized as the "weakest link" in America's deterrent against Soviet nuclear attack. In light of this, Lt Gen Herres focused his efforts on the survivability of the nuclear C³ architecture in the event of nuclear war against the Soviet Union. The overall purpose of this challenge was to convince the Soviets that the US could continue to manage its forces effectively after a nuclear attack. 8 This was a necessary effect to achieve strategic deterrence against the Soviet's air, submarine, and missile nuclear arsenal. In order to attain this objective, Lt Gen Herres coordinated with the services and CINCs to develop a C³ system that was reliable, secure, redundant, and interoperable for US high-level command and control echelons. 9 While developing the US military's C³ architecture, Herres satisfied another point he made in his ACSC thesis, "Air Force executives must be able to exploit the rapidly expanding tools and techniques of management which assist in isolating, defining, evaluating, and testing problems and their solutions." ¹⁰ This proved an enormous endeavor taking into consideration all the air, space, ground, and sea necessities for the US C³ system.

The next position that emphasized the value of General Herres' early career diversity was Commander in Chief of the US Space Command from September 1985 to February1987. During this period of his career, Gen Herres served simultaneously in three positions: CINC of the North American Aerospace Defense Command (NORAD), Commander of the US Air Force Space Command, and CINC of US Space Command. The reason US Space Command merits more emphasis than his other two responsibilities is Gen Herres served

⁷ The Staff of the Carnegie Panel on US Security and the Future of Arms Control, *Challenges for US National Security* (New York, NY: Carnegie Endowment for International Peace, 1982), 85.

⁸ The Staff of the Carnegie Panel on US Security and the Future of Arms Control, *Challenges for US National Security* (New York, NY: Carnegie Endowment for International Peace, 1982), 125.

⁹ Kurt Gottfried and Bruce G. Blair, *Crisis Stability and Nuclear War* (New York, NY: Oxford University Press, 1988), 318.

¹⁰ Major Robert T. Herres, "The Road Ahead' and Air Force Executive Development," (Maxwell Air Force Base, Alabama: Air Command and Staff College, June 1965), 71.

as an architect, promoter, and defendant for the creation of the new Unified Command.

Gen Herres' relationship with Gen Vessey, the Chairman of the Joint Chiefs of Staff (CJCS), was a major factor in the successful creation of US Space Command. Vessey fully supported the Unified Space Command effort and worked hard at the issue from his position as the CJCS. 11 Generals Herres and Vessey successfully encouraged and influenced the Joint Chiefs of Staff (JCS) to agree on the creation of US Space Command and support a recommendation to the SecDef. Generals Herres and Vessey persuaded the JCS by highlighting the inadequacies of military space systems because of the lack of a single operational chain of command. 12 Gen Herres stressed the necessity for unity of command for the growing array of space systems and their distinctive capabilities. ¹³ Herres further asserted the disunity of the current military space structure could not effectively support all of the services' needs as efficiently as putting all the space operations under one command. Shockingly, Generals Herres and Vessey's deliberations achieved their goal of establishing a Unified Space Command without it becoming an overly acrimonious issue amongst the JCS.

By then, Gen Herres thoroughly understood the military-political system. He knew how to construct US Space Command in a way that would preempt critics who were against the existence of the Unified Space Command. The Navy, representing most of the critics, carefully monitored the relationship between Air Force Space Command and the US Space Command. Adm Carl Trost, Chief of Naval Operations, felt the Air Force should not dominate space operations for the US military. Adm Trost and his Navy supporters in Congress felt an Air Force-led Unified Space Command might develop and evolve in the

¹¹ General Herres, interview, 27.

¹² General Robert T. Herres, General United States Air Force, Commander in Chief North American Aerospace Defense Command, Commander in Chief Aerospace Defense Command, Commander in Chief United States Space Command, Commander Air Force Space Command, Volume One, Selected Speeches, 30 July 1984 – 6 February 1987 (Colorado Springs, CO: US Air Force, 1987), 18.

¹³ Herres, Volume One, Selected Speeches, 18.

same manner as the parochial Strategic Air Command. In an effort to temper the Airman's domination of space and to protect the Navy's provincial space interests, the Navy formed the Naval Space Command. However, this gambit did not work because Gen Herres adroitly subordinated the Navy's Space Command to US Space Command by convincing the SecDef and the US Congress that the service specific space commands should function as resource managers, but operational control of all military space assets should fall under US Space Command. The SecDef and US Congress agreed with Herres' assertions and passed a law to formalize the relationship between the service specific space commands and the US Space Command.

Another delicate issue that Gen Herres overcame to promote the establishment of the Unified Space Command was the delineation of the roles and responsibilities between NORAD, Air Force Space Command, and US Space Command. Herres had to craft credible but viable relationships between NORAD, US Space Command, and the Air Force Space Command. Gen Herres successfully realized this through clear thinking, communication, and leadership. Herres' early joint experiences in the EIC and knowledge from PME allowed him to transcend the service parochialism of Air Force Space Command and NORAD. Herres assertively convinced other senior leaders within the Air Force that relinquishing control of their space assets to US Space Command was in the best interest for all of the military services. Gen Herres contended the transfer of control was necessary to manage more effectively the finite space resources.

To accomplish this, Gen Herres used the analogy of Air Force airlift before the Military Airlift Command stood up. ¹⁶ Gen Herres conveyed to the other Air Force senior leaders that, "Just like airlift, space operations were a

¹⁴ General Herres, interview, 26.

General Robert T. Herres, General United States Air Force, Commander in Chief North
 American Aerospace Defense Command, Commander in Chief Aerospace Defense Command,
 Commander in Chief United States Space Command, Commander Air Force Space Command,
 Volume Three, Articles, Interviews, Statements, and Congressional Testimony, 30 July 1984 – 6
 February 1987 (Colorado Springs, CO: US Air Force, 1987), 20.

¹⁶ Herres, Volume Three, Articles, Interviews, Statements, and Congressional Testimony, 20.

critical resource which must be allocated – not in an ad hoc manner to meet service specific requirements, but with a joint operational focus to meet critically important requirements of the unified and specified commands employing US military forces around the world in their various theaters." ¹⁷ This episode proved Herres' even-handedness was not only directed toward the Navy. He also took his own service to task when it was necessary.

The fact that Gen Herres was the commander for NORAD and Air Force Space Command further helped him understand how to delineate the roles and responsibilities. He was able to achieve this endeavor without destroying the spirit and sense of cooperation between the three commands. Furthermore, his organization of US Space Command did not prohibit the other commands from achieving their fundamental and assigned missions. Gen Herres did this by incrementally integrating US Space Command's mission into the other commands. For NORAD, he ensured the space capabilities provided ample warning of aerospace attack through satellite surveillance and the early warning system. Herres worked to identify how the Air Force Space Command's organize, train, and equip responsibilities supported US Space Command's mission of space operations employment for the joint community. Space Community.

After the delineating the roles and responsibilities of US Space Command, Gen Herres turned his efforts towards the most important issues facing the US space community which were defining the mission, organizing the personnel, and developing the infrastructure for US Space Command. ²¹ The mission development portion for US Space Command was especially difficult in light of President Reagan's 23 March 1983 unveiling of the Strategic

Herres, Volume Three, Articles, Interviews, Statements, and Congressional Testimony, 126.
 Lieutenant General Donald C. Mackenzie, Royal Canadian Air Force (Deputy Commander in

Chief, North American Aerospace Defense Command Colorado Springs, CO), interview by Dr. Herbert M. Zolot, 16 October 1987, transcript, #K239.0512-1848, USAF Historical Research Center, Maxwell AFB, AL, 12.

¹⁹ Mackenzie, interview, 12.

²⁰ Herres, Volume Three, Articles, Interviews, Statements, and Congressional Testimony, 20-25.

²¹ General Robert T. Herres, "Strategic Aerospace Defense: The Challenges of the 1980s." Paper presented at the Air War College Associate Programs. Maxwell AFB, AL, March 1985, 12.

Defense Initiative (SDI), known as "Star Wars." ²² Gen Herres needed to determine how to integrate the controversial and evolving "Star Wars" technologies, concepts, and policies into US Space Command's mission. Gen Herres also needed to incorporate President Reagan's August 1984 National Space Strategy, a guideline that identified five elements to shore up potential shortfalls in the US space program as compared to the Soviet space program. ²³

Gen Herres asserted the Soviet's had five key space advantages over the US. First, the Soviets outperformed the US at a rate of four to one yearly in space launches. They had an option of eight different launch vehicles as compared to the US' three. ²⁴ Second, the Soviets had satellites in more orbits than the US. They expanded their satellite orbits from the low earth and Molniya orbits to include the geosynchronous orbit. Third, the Soviets extended their space tracking station capability to include naval ships. They built the NEDELIN Class auxiliary ship which supported their space programs from international waters and provided them the capability to track and recover spacecraft worldwide. ²⁵ Fourth, Moscow was defended by the world's only operational anti-ballistic missile system. ²⁶ Fifth, unlike the US, the Soviet's had operational offensive space weapons. The Soviets developed and deployed a fractional orbiting bomb system. This system was an unmanned spacecraft that could be launched and complete a partial orbit with a nuclear

²² James Clay Moltz, *The Politics of Space Security: Strategic Restraint and the Pursuit of National Interests* (Stanford, CA: Stanford University Press, 2008), 191-192.

²³ President Reagan's National Space Strategy outlined five necessary objectives for US space operations. The first objective was assured access to space. This asserted the US must retain the ability to enter, transit, and use space without interference. The second objective required the pursuit of a long-term survivable enhancement program for space systems judged as critical to national security. The third objective was a continued study of space arms control options for national security. The fourth directed US space and space related programs to support the SDI. The fifth objective directed sustenance of a vigorous space technology program. General Robert T. Herres, *General United States Air Force, Commander in Chief North American Aerospace Defense Command, Commander in Chief Aerospace Defense Command, Commander in Chief United States Space Command, Commander Air Force Space Command, Volume One, Selected Speeches, 30 July 1984 – 6 February 1987* (Colorado Springs, CO: US Air Force, 1987), 50.

²⁴ Herres, Volume One, Selected Speeches, 49.

²⁵ Herres, Volume One, Selected Speeches, 51.

²⁶ Herres, Volume One, Selected Speeches, 82.

weapon on board. After the fractional orbit it could be returned to earth on command and detonated. ²⁷ They also had an operational laser program with the ability to interfere with US satellites in LEO. Gen Herres took all the Soviet's space advantages into account when making decisions on how to design, build, and employ US military space assets and strategy. ²⁸ In his effort to understand the Soviet's space and nuclear capabilities, Herres sometimes fell back into a role similar to his job as an intelligence analyst in the EIC. At times, he became overly enamored with analyzing intelligence on the Soviets and spent more time than necessary for a commander of his rank in the intelligence center. ²⁹

Gen Herres viewed space operations not only as a force multiplier but as an extension of the US deterrence strategy based on mutually assured destruction (MAD). ³⁰ The MAD strategy asserted the US could deliver a fatal nuclear counterblow in retaliation to an initial Soviet nuclear strike. ³¹ Gen Herres studied deterrence theory and its application to US national security while attending ACSC and ICAF. His first application of deterrence theory was not as CINC US Space Command but as an astronaut in the MOL program and as the 449th Bomb Wing Commander earlier in his career. These earlier experiences facilitated Gen Herres' supposition that the MAD deterrent strategy left the US with minimal military options and he argued the need for a defensive capability to strengthen the strategy. ³² Herres knew the deterrence strategy was the foundation for national survival against a Soviet nuclear attack. Herres believed the US needed to create the perception that such an attack would be too costly for the Soviet Politburo and he needed to put the US in a position of advantage by incorporating defensive space capabilities. ³³ Gen

²⁷ Herres, Volume One, Selected Speeches, 79.

²⁸ Herres, Volume Three, Articles, Interviews, Statements, and Congressional Testimony, 70.

²⁹ Major General Maurice Padden (Former Vice Commander Air Force Space Command), interview by author, 10 April 2009.

³⁰ Henry Kissinger, *Diplomacy* (New York, NY: Simon and Schuster, Inc., 1994), 779.

³¹ Colin S. Gray, *Modern Strategy* (Oxford, United Kingdom: Oxford University Press, 1999), 306.

³² Herres, Volume Three, Articles, Interviews, Statements, and Congressional Testimony, 126.

³³ Herres, Volume One, Selected Speeches, 21.

Herres based his advocacy for defensive capabilities on his earlier experience of designing space defensive systems as an astronaut in the Air Force MOL program; however these systems were still in their infancy.³⁴

In addition to MAD, Gen Herres dutifully evolved the US Space Command strategy to include SDI and National Space Strategy directives. Gen Herres' vision for US Space Command's chartered mission evolved into missions including: space support and control, surveillance and warning, and ballistic missile defense. Gen Herres developed policies and procedures for operational direction of space assets as assigned by the JCS to conduct these missions. Besides addressing Soviet space strengths, the other central element in Gen Herres' formulation of strategy was ensuring the US Space Command provided space support to the Unified and Specified Commands which employed US military forces worldwide. Gen Herres' earlier experience with the ideas of deterrence, as a wing commander in SAC, helped him immensely in formulating strategy which incorporates higher organization's strategies and directives.

To gain support for US Space Command, Gen Herres developed a cordial and credible media relationship. The media became a US Space Command ally in informing the JCS, US Congress, and the American people. He knew problems could arise if US Space Command tried to hide facts or otherwise cover up bad news or unfavorable intentions from interested parties. Again, this is where Gen Herres' integrity and composure served as guiding principles for his leadership. Herres knew the faster his public affairs staff got the Space Command's perspective to the media, the story had a better chance of being fair, balanced, and favorably received. ³⁷ His goal with the media was to make them become professional colleagues versus adversaries. ³⁸ Herres went

³⁴ James Bamford and C. Scott Willis, Astrospies, A NOVA production, 56 min., 2008, DVD.

³⁵ Herres, Volume One, Selected Speeches, 102.

³⁶ Herres, Volume Three, Articles, Interviews, Statements, and Congressional Testimony, 60.

³⁷ Herres, Volume Three, Articles, Interviews, Statements, and Congressional Testimony, 25.

³⁸ General Robert T. Herres, General United States Air Force, Commander in Chief North American Aerospace Defense Command, Commander in Chief Aerospace Defense Command, Commander in Chief United States Space Command, Commander Air Force Space Command,

through these efforts because he valued the support of the American people. He knew without their support, US Space Command could ultimately forget about receiving money needed to develop necessary space programs.

Herres described US Space Command's congressional, service, and public support as "a telling process; not a selling process." As part of Gen Herres' telling process, he pursued press conferences and participated in many one-on-one interviews with local and national news agencies. Gen Herres further pushed his message by submitting articles about US Space Command's mission and its importance for national security to local and national newspapers and defense industry and professional military magazines.

Gen Herres also advocated for US Space Command's mission by engaging in community outreach. His robust political agenda included visiting the county commissioners, the mayors, the city councils, and chamber of commerce executive councils for Colorado Springs, Pueblo, and Denver. ⁴⁰ He used VIP visits to US Space Command as another avenue to tell the story. He viewed all the congressional visits as an opportunity to leave the US senators, Representatives, and staffers with the impression that the US Space Command had a solid purpose and deserved funding for current and future programs. ⁴¹

In performance of his duties as the US Space Command CINC, Gen Herres portrayed the trait of creativity and imagination from his GWU thesis. Herres' belief as a major had been that "few, if any, of the necessary professional skills of the Air Force executive can be achieved if he lacks creativity and imagination. These intangible characteristics are further needed to meet the crucial tasks of: developing flexible strategy and tactics; developing useful and realistic doctrine in the light of political and technological realities; and organizing to meet a variety of military and political objectives." ⁴² Gen Herres helped to defend service programs on Capitol Hill, before the Office of

Volume Two, Selected Speeches, 30 July 1984 – 6 February 1987 (Colorado Springs, CO: US Air Force, 1987), 104.

³⁹ Herres, Volume Two, Selected Speeches, 102.

⁴⁰ Herres, Volume Two, Selected Speeches, 105.

⁴¹ General Herres, interview, 28.

⁴² Herres, "The Road Ahead'," 71.

the Secretary of Defense, and before the Defense Resources Board. All of Gen Herres' past experiences gave him a broad perspective for the joint duties of CINC US Space Command. Reflecting on his past experiences, Herres recalled he had "a brother with a career in the Army. I went to the Naval Academy. I had a lot of dark blue in my blood. And I understood the Navy. You can't spend four years at the academy, including summer cruises and all the other related training, and not come away without understanding the Navy pretty well. That helped give me perspective. All of this added together meant, in my view, that putting Space Command together was a job I was most perfectly suited for." ⁴³ These experiences certainly gave him a credible perspective on the other service's traditions and nuances. Furthermore, his joint experience in ICAF and the EIC imparted an uncommon insight of the other services operational and strategic space requirements. All these past experiences supplied him with command and control, operational, strategic, and political experience necessary to develop an organization like US Space Command.

The pinnacle of Gen Herres' military opportunities for exploiting his diverse upbringing came to fruition after the Goldwater-Nichols Act of 1986 reorganized the Department of Defense and created the position of VCJCS. The Goldwater-Nichols Act came about because of a perceived weakness by the US Congress in the JCS command system and unnecessary interservice rivalry. 44 The VCJCS position was created to encourage the services to cooperate in more joint endeavors. 45 By ratifying the Goldwater-Nichols Act, Congress hoped to achieve improvements in how the services fought wars together, developed and purchased joint weapon systems, and reduce the Chairman's work load. 46

The Goldwater-Nichols Act made the VCJCS the second highest ranking officer in the US military. The service chiefs were vehemently opposed to the assigned seniority of the VCJCS. Admiral William Crowe, Jr., the CJCS, knew

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⁴³ General Herres, interview, 32.

⁴⁴ Eric C. Ludvigsen and Philip J. Fick, "Speeches, awards, exhibits, music and pageantry highlight today's Army at AUSA's annual meeting", *Army*, vol. 37 (December 1987), 70.

⁴⁵ David J. Lynch, "Journeying to 'Jointness", Government Executive, June 1989, 46.

⁴⁶ Herres, "Keynote luncheon address to the Armed Forces Communications and Electronics Association Convention," 40.

the first person serving in the position faced a sensitive situation with the service chiefs given the sharp battle and residual resentment over the VCJCS rank. Adm Crowe believed Gen Herres was well suited for this position considering his diverse military record and his composure. Adm Crowe knew Gen Herres to be a patient and low-key leader who gave little thought to ceremony or status. Adm Crowe knew Herres' type of temperament was necessary to work with the resentful service chiefs. Herres was flattered and humbly accepted the position when the Adm Crowe offered him the opportunity to be the first VCJCS. Though, Gen Herres' personal preference was to remain as the US Space Command Commander until his mandatory retirement in two and a half years.

Since Gen Herres was the plank owner of the newly created VCJCS position, he had a lot of influence in defining the responsibilities. While defining the responsibilities, Gen Herres took advantage of Colonel Randy Blanks' CJCS staff experience. Colonel Blanks served as the USAF member on the Chairman's Staff Group when Gen Vessey was the CJCS. Col Blanks amassed an enormous amount of invaluable experience on the Joint Staff working influential military issues and coordinating with the White House Staff. ⁴⁹ After his service for the CJCS staff, Col Blanks became Gen Herres' executive officer at US Space Command.

Once Gen Herres discovered he was chosen as the VCJCS, he sent Col Blanks on temporary duty at the Pentagon as a liaison to work with the Chairman's Staff Group. Herres wanted Col Blanks and the CJCS staff group to establish the responsibilities of the VCJCS position. The Goldwater-Nichols Act obliquely defined the VCJCS billet to be whatever the Chairman and the Secretary of Defense wanted it to be. Gen Herres and Adm Crowe decided this vague duty description needed more specificity. Consequently, Gen Herres, Col

⁴⁷ Admiral William J. Crowe, Jr. with David Chanoff, *The Line of Fire: From Washington to the Gulf, the Politics and Battles of the New Military* (New York, NY: Simon and Schuster, 2001), 159.

⁴⁸ Herres, *Volume Three, Articles, Interviews, Statements, and Congressional Testimony*, 219. ⁴⁹ General Herres, interview, 29.

Blanks, and the CJCS staff group developed a comprehensive list of specific responsibilities for the VCJCS. Herres applied his lessons learned from working as the JCS C³ Director and outlined responsibilities that he believed would help the Chairman carry out his duties and institutionalize the VCJCS position. After much deliberation between Gen Herres, Col Blanks, and the CJCS staff group, the finished product suggested fifteen specific duties to be accomplished by the VCJCS. ⁵⁰ Adm Crowe concurred with the suggested responsibilities as did the SecDef, Casper Weinberger, who was "encouraged by their scope and substance." ⁵¹

Of the fifteen responsibilities, five of the assigned duties were distinctive items to help foster joint operations among the military services. The five major joint enhancing duties assigned to the Gen Herres by Adm Crowe were military resource management, joint personnel policy, joint professional military education, oversight of the defense agencies, and oversight of deliberate war planning. ⁵² Out of these five responsibilities, Gen Herres made the greatest contributions in the military resource management and allocation processes.

In the dominion of resource management, Gen Herres served in two key areas; the Planning, Programming, and Budgeting System (PPBS) and the acquisition process. In the PPBS, Gen Herres participated in the Defense Resources Board (DRB). The DRB was the Office of the SecDef's corporate review board, which helped Secretary Weinberger direct the PPBS process. Gen Herres' working expertise with the combatant commands' operational plans, facilitated his ability to authoritatively represent the CINCs requirements in the event of resource shortfalls and competing JCS priorities. ⁵³

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⁵⁰ Admiral William J. Crowe, Jr., Chairman, Joint Chiefs of Staff, to the Honorable Casper Weinberger, Secretary of Defense, memorandum, 6 April 1987.

⁵¹ The Honorable Casper W. Weinberger, Secretary of Defense, to Admiral William J. Crowe, Jr., Chairman, Joint Chiefs of Staff, memorandum, 15 April 1987.

⁵² Admiral William J. Crowe, Jr., Chairman, Joint Chiefs of Staff, to the Honorable Casper Weinberger, Secretary of Defense, memorandum, 6 April 1987.

⁵³ Herres, "Keynote luncheon address to the Armed Forces Communications and Electronics Association Convention", 40.

Gen Herres served as the chairman of the Joint Requirements Oversight Council (JROC) and as the vice chairman of the Defense Acquisition Board (DAB) in the dominion of acquisitions. The JROC's charter charged the VCJCS with the authority to provide military program oversight and monitoring from the beginning of the acquisition process. 54 The JROC responsibilities also emphasized the combatant commander's requirements, while ensuring interoperability and feasibility. Previously, the CINCs had little influence over decisions made in Washington, DC; furthermore, "weapons, communication equipment, and other supplies were purchased without adequate input from the CINCs who would us them in battle." 55 Under the authority of Gen Herres, the CINCs had a champion to fight for their requirements in DC. Additionally, the JROC worked to "reduce parallel and duplicative efforts from the individual services and promoted economies of scale". 56 Gen Herres institutionalized the role of the military in setting requirements for major weapons systems, taking the responsibility from the civilian military leadership and putting that process back in the hands of the Joint Staff. Under Herres, the JROC took its first steps toward assuming a prominent position in the resource allocation process. 57

Gen Herres ran the JROC with an aim to bring the service chiefs and CINCs to consensus. By his own account, Herres was prepared to lay down the law if consensus could not be reached. Herres asserted, "If it comes down to the crunch and I flat disagree, then I'm going to say this is the way it's going to be." 58 But Gen Herres did not resort to this extreme during his tenure as VCJCS. Some critics suggested that this only served to water-down requirements and was an indication that the service chiefs still drove the

⁵⁴ Major Thomas R. Goedkoop, "Supporting the CINCs: The Role of the Goldwater-Nichols Department of Defense Reorganization Act of 1986" (Monograph, School of Advanced Military Studies, Fort Leavenworth, KS, 1989), 25.

⁵⁵ Lynch, "Journeying to 'Jointness," 46.

⁵⁶ Goedkoop, "Supporting the CINCs," 25.

⁵⁷ Gordon Nathaniel Lederman, Reorganizing the Joint Chiefs of Staff: The Goldwater-Nichols Act of 1986 (Westport, CN: Greenwood Publishing Group, 1999), 94.

⁵⁸ Lynch, "Journeying to 'Jointness," 47.

budget and acquisition process.⁵⁹ This critique definitely serves as a demerit against Gen Herres mission of "ensuring soldiers, sailors, airmen, and marines have the best systems available to carry out the national strategy." ⁶⁰ In response to these critiques, Gen Herres replied, "We have validated more requirements to initiate new programs in the past couple of years than we have in the whole history of the institution of the JCS." ⁶¹ It was Gen Herres' earlier joint experiences in AFIT, EIC, and ICAF which helped him anticipate the needs of each service to support the national strategy.

As the only military member of the DAB, Gen Herres served as an advocate for the service chiefs and combatant commander's military requirements. In tandem with the chairman of the DAB and the Undersecretary of Defense for Acquisition, Gen Herres helped "define joint weapons requirements, assessed their affordability, defined trade-offs between cost and performance." 62 Additionally, he helped decide whether to develop the item, purchase, or adapt existing military or commercial systems. 63 Again, this was not an easy process to articulate military requirements to civilian government officials and Congressional members.

The most controversial military program Gen Herres dealt with in the JROC and DAB was "Star Wars". He had extensive experience with this program as the US Space Command Commander which helped him navigate the political minefield surrounding the program. As the former US Space Command leader, many thought Gen Herres would be a staunch supporter of the program. Yet, he could not be a blind supporter of "Star Wars" given his new responsibilities as the VCJCS. Gen Herres, along with Adm Crowe, were not opposed to the program but both thought the military needed more information on the capabilities before approving a large portion of the defense budget to fund the program. Gen Herres testified to congress in 1988 that the

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⁵⁹ Lynch, "Journeying to 'Jointness," 47.

⁶⁰ Herres, "Keynote luncheon address to the Armed Forces Communications and Electronics Association Convention", 41.

⁶¹ Lynch, "Journeying to 'Jointness," 47.

⁶² Goedkoop, "Supporting the CINCs," 25.

⁶³ Goedkoop, "Supporting the CINCs," 25.

military was not ready to recommend fielding "Star Wars" anytime soon. He cautioned congress that several more years of research was needed "to demonstrate that these technologies are mature enough to be weaponized, that this system will perform as advertised and as expected, and that the costs that will have to be expended to field the system are reasonable and absorbable." ⁶⁴

This testimony put Herres at odds against SecDef Weinberger, other Pentagon officials, and many senior Air Force leaders. SecDef Weinberger did not consider "Star Wars" as a program in question. As far as he was concerned, "President Reagan made the decision to go ahead with the program and the only job left was to figure out how."65 Herres received further criticism from Mr. Frank Gaffney, Assistant Secretary of Defense for International Security Policy, who said, "I think the Chiefs are death on Star Wars"...66 Mr. Gaffney further explained that Herres and the Joint Chiefs considered the program, "a challenge, and an undesirable competitor for resources they would rather see spent on other things." 67 Here, Mr. Gaffney was correct because Gen Herres did indeed have an "expressed concern" with the "big bite SDI would take out of the strategic budget". 68 Additionally, many senior Air Force leaders criticized Gen Herres' standpoint since the Air Force had a vested interest in "Star Wars". The senior Air Force leaders believed "Star Wars" would increase the service's prerogatives since most of the military's space operators resided in the Air Force. Despite SecDef Weinberger, Assistant Secretary Gaffney, and senior Air Force leader's criticism, Gen Herres relied on his integrity and his earlier experiences in the MOL program, PME, and US Space Command to develop an informed decision on the "Star Wars" program. Herres simply believed he was doing the right thing because it was the right thing to do.

⁶⁴ John H. Cushman, Jr., "The Nation: Beyond the Campaign, More Tests Await 'Star Wars" *The New York Times*, 16 October 1988.

⁶⁵ Admiral William J. Crowe, Jr. with David Chanoff, The Line of Fire, 303.

⁶⁶ Cushman, "The Nation: Beyond the Campaign, More Tests Await 'Star Wars'".

⁶⁷ Cushman, "The Nation: Beyond the Campaign, More Tests Await 'Star Wars".

⁶⁸ Ronald E. Powaski, *Return to Armageddon: The United States and the Nuclear Arms Race,* 1981-1999 (Oxford, UK: Oxford University Press, 2003), 63.

Gen Herres, with Adm Crowe's support, forced the "Star Wars" program acquisitions through the DAB review process despite the political and lobbyist pressure to build the hardware prematurely. Herres knew if he let the critics have their way, "Star Wars" would suffer from large cost overruns or fall short of performance expectations. ⁶⁹ Knowing he was walking on thin ice with SecDef Weinberger, Gen Herres patiently but resolutely explained the reasons for subjecting "Star Wars" to the same process as all of the other potential military acquisitions. After a few sessions of debate, Gen Herres finally won over SecDef Weinberger and earned his support. During his trials and tribulations with the SecDef, Gen Herres fulfilled yet another mark of a successful senior leader that he had identified years earlier in his GWU thesis: "The military professional must understand the role of the civilian manager in government and the federal political executive. To fully grasp this, he must have a thorough understanding of the domestic political process." ⁷⁰

On the whole, Gen Herres' performance as the VCJCS was admirable to all who witnessed his actions. Adm Crowe definitely displayed his confidence in Gen Herres' ability to lead the JCS. This was evident from Adm Crowe's willingness to carry out his tenuous travel schedule and unquestionably leave the responsibilities of the CJCS position to Gen Herres. This confidence was further displayed after Adm Crowe's second term as CJCS ended in September 1989, and he declined nomination for another term. Without pause, he suggested President Bush and SecDef, Dick Cheney, consider Gen Herres as the new CJCS. Many in the military and Pentagon, in particular, felt Herres was the front-runner for the CJCS job considering his current position. Additionally, it was the USAF's "turn" in the unwritten rotation of the CJCS selection. Even Gen Colin Powell anticipated Gen Herres as a shoo-in for CJCS and believed he would be a superb choice. Much to the surprise of many,

⁶⁹ Admiral William J. Crowe, Jr. with David Chanoff, *The Line of Fire*, 305.

⁷⁰ Herres, "The Road Ahead'," 70.

⁷¹ Colin L. Powell and Joseph E. Persico, *My American Journey* (New York, NY: Random House, Inc., 1995), 406.

⁷² Powell, My American Journey, 406-407.

President Bush and SecDef Cheney picked Gen Powell over Gen Herres for the CJCS position. This was especially surprising because Gen Powell was the youngest and most junior of the eligible four-star generals.⁷³

After the announcement of Gen Powell's selection for CJCS, Gen Herres humbly drove to his home to escape the Pentagon sensationalism of President Bush and Secretary Cheney's decision. Without doubt, Gen Herres was disappointed he was not selected to be the CJCS but felt elated that his personal friend Gen Powell was selected in his stead. Gen Herres hugely admired Gen Powell and knew he was a noble choice for the job. Gen Herres Gen Herres' arrival at his quarters, Reverend Ronald Christian paid him a visit. Gen Herres, Shirley, and Rev Christian discussed how it was God's will for the day's events and there was no disgrace in the superior's decision. After all, Rev Christian pointed out to Gen Herres that his military career was a great success and his accomplishments were historically noteworthy.

Despite Gen Herres' disappointment, he continued to be a loyal VCJCS while working for Gen Powell. Gen Herres continued to work the duties and responsibilities as outlined under Adm Crowe. Gen Powell did not feel the need to change the responsibilities because Gen Herres thoroughly briefed him on how the duties were devised and worked. Additionally, Gen Powell served as the National Security Advisor during the time the VCJCS list was officially approved; consequently, he had surveyed the list in the past. Gen Herres worked with Gen Powell for four months before he retired from active duty on 28 February 1990.

Appropriately, Secretary Cheney and Gen Powell officiated Gen Herres' retirement ceremony. As a fitting tribute to his service and symbolic of his

⁷³ Karen DeYoung, *Soldier: The Life of Colin Powell* (New York, NY: Random House, Inc., 2006), 177.

⁷⁴ Reverend Ronald Christian, interview by author, 9 Mar 2009.

⁷⁵ Shirley Herres (Widow of General Herres), interview by author, 5 May 2009.

⁷⁶ Shirley Herres, interview.

⁷⁷ Christian, interview.

⁷⁸ General Herres, interview, 31.

⁷⁹ General Herres, interview, 31.

⁸⁰ Cole et al., The Chairmanship of the Joint Chiefs of Staff, 159.

military roots, the 11th Company from USNA marched in honor of Gen Herres during the retirement ceremony. ⁸¹ This was the same company Gen Herres was a member of when he was a Midshipman. The Midshipmen proudly marching before Gen Herres were undeniably a suitable finale to an illustrious military career that started at the Naval Academy a short thirty-six years ago.

Certainly, Gen Herres integrity and composure played a key role in all his duties as a general officer. This was especially true when his personal support went against a parochial USAF priority requirement or acquisition. His broad educational foundation coupled with the early establishment of a diverse military career clearly afforded him the experience and foundation to be a successful senior military leader. His strategic vision and distinctive leadership style as displayed in his duties of JCS Director of C³; CINC, US Space Command; and VCJCS served as the Magnum Opus of his early career diversity.

⁸¹ Shirley Herres, interview.

Conclusion

Specialization is normally thought of as the limitation of one's career to a professional specialty at the exclusion of others which tend to broaden individual experience.

-Major Robert T. Herres.¹

Gen Herres' decision to cross commission into the Air Force from the US Naval Academy in 1954 foreshadowed a thirty-six year career of diversity. Early in Gen Herres' Air Force career, he recognized the value of career diversity for future leadership endeavors. Herres prophesized his own trajectory in a thesis he wrote while a student at the Air Command and Staff College. In it, he contended the Air Force must intentionally develop and put into practice diverse career paths for potential senior Air Force leaders. For him, the "Air Force executive must have a military background and expertise which transcends his service component and involves a sound understanding of the entire spectrum of armed conflict." In the years after he wrote that thesis, Gen Herres accomplished exactly what he had argued as a young major in 1964. He consistently accepted a diverse career path that eventually facilitated his ability to transcend his service and effectively lead joint military organizations.

Gen Herres' diversity was not the only factor for his success as a senior military leader. His character traits of integrity, composure, and faith accentuated his diverse foundation. Furthermore, his dedication to lifetime learning sharpened his communication skills and fostered the development of his strategic and operational perspective. A life is a complicated thing, and many traits contributed to Gen Herres' success as a military man. But first among these was the diversity in duty and outlook he always nurtured in his career.

¹ Major Robert T. Herres, "The Road Ahead' and Air Force Executive Development," (Maxwell Air Force Base, Alabama: Air Command and Staff College, June 1965), 98.

² Herres, "The Road Ahead," 2.

³ Herres, "The Road Ahead," 70.

Educationally, Gen Herres graduated from the US Naval Academy, successfully completed ACSC and ICAF, and earned two graduate degrees--one in Electrical Engineering and the other in Public Administration. His professional military and graduate degree choices revealed a mind capable of diversity. The knowledge gained at the US Naval Academy, ACSC, and ICAF helped him learn more about the other service's roles and responsibilities in joint operations, and the educational experiences offered a perspective on what the other services expected of the Air Force in the joint arena.

Gen Herres started his early career as a fighter pilot, continued as a maintenance officer, gained further breadth as an intelligence analyst, and rounded it out as a weapons instructor at Air University. To be sure, his early diversity came at a cost to his credibility in the fighter pilot community. Herres did not become an expert in fighter aircraft operations, like many of his peers, because he forewent the experiences of serving in more positions within fighter squadrons, groups, and wings. For a myriad of reasons, such as his involvement in space operations during the beginning of the space race against the Soviets and his selection as a Bomb Wing Commander for Strategic Air Command, this did not preclude his advancement through the ranks of the Air Force. More importantly, what Herres gained when he left a normal fighter pilot career was a diverse foundation that shaped his later success.

During his middle years in uniform, Gen Herres benefited from his extensive training in the ARPS and MOL programs. These training regimens granted opportunity to branch out into space operations. The choice to participate in these programs, however, sacrificed his opportunity to become a squadron commander and almost cost him the chance of gaining combat experience in the Vietnam War. The lack of squadron command and combat experience could have been disastrous for his future. This fate was not realized because Strategic Air Command selected Herres as a commander for the 449th BW and 310th SW based in part on his earlier career diversity. These assignments served as gateways into bomber and tanker operations and provided him command and combat flight experience during the latter part of

the Vietnam War. Combining all his mid-career opportunities with his early career diversity distinctly cultivated a breadth and depth that led to his success as a senior military leader.

Gen Herres' positions as a senior leader put to the test his career diversity. His early compilation of on-the-job experiences and formal education helped him formulate the necessary strategic vision and leadership style to succeed in his duties as the JCS Director of C³, US Space Command CINC, and VCJCS. These early career experiences afforded Gen Herres a holistic perspective of Air Force capabilities in joint military operations. From his holistic foundation, Herres was better able to transcend service parochialism and effectively integrate air and space power in support of joint operations. Certainly, Gen Herres' integrity, composure, and faith played key roles in all his duties as a general officer by guiding his decision making. While serving in these leadership positions, Gen Herres' ability to communicate clearly the US, military services, and combatant CINCs' requirements often persuaded his varied audiences to support his decisions. Gen Herres' successes in these three positions might not have been possible without his early career diversity.

General Herres career suggests that restricting the avenues to reach the pinnacle of Air Force leadership robs the service of an opportunity for creating a deep bench from which senior-most members are selected. The Air Force should explicitly allow career paths stretching well into flag rank that are based on diverse experiences. Such a deliberate plan will perhaps cultivate well rounded strategic outlooks and leadership so necessary in today's complex and ever-changing world.

Bibliography

Academic Papers

- Goedkoop, Maj Thomas R. "Supporting the CINCs: The Role of the Goldwater-Nichols Department of Defense Reorganization Act of 1986." Monograph, School of Advanced Military Studies, 1989.
- Herres, Captain Robert T. and First Lieutenant Thomas C. Brandt. "An Analog Simulation and Analysis of an Inertial Navigation System for Helicopter Use." Master's Thesis, Air Force Institute of Technology, March 1960.
- Herres, Maj Robert T. "The Road Ahead' and Air Force Executive Development." Master's Thesis, George Washington University, June 1965.

Articles

- Arkin, William and Peter Pringle. "C³I: Command Post for Armageddon," *The Nation*, April 1983, 434-439.
- Cushman, John H., Jr. "The Nation: Beyond the Campaign, More Tests Await 'Star Wars" *The New York Times*, 16 October 1988.
- Kutyna, Major Donald J. "The Aerospace Research Pilot School," *Air University Review* XXI, no.1 (November December 1969): 81-91.
- Ginsburgh, Colonel Robert N. "The Challenge to Military Professionalism," *Foreign Affairs*, Vol. 42, No. 2 (January 1964), 263.
- Ludvigsen, Eric C. and Philip J. Fick. "Speeches, awards, exhibits, music and pageantry highlight today's Army at AUSA's annual meeting", *Army*, vol. 37 (December 1987), 66-70.
- Lynch, David J. "Journeying to 'Jointness", *Government Executive*, (June 1989): 46-47.
- Rosenberg, Maj Gen Robert A. "The Annapolis Connection," *Air Force Magazine* 67, no. 2 (February 1984): 74-78.

Books

- Barlow, Jeffrey G. Revolt of the Admirals: The Fight for Naval Aviation 1945-1950. Washington, DC: Ross & Perry, Inc., 2001.
- Crowe, Adm William J., Jr. and David Chanoff. *The Line of Fire: From Washington to the Gulf, the Politics and Battles of the New Military* New York, NY: Simon and Schuster, 2001.
- DeYoung, Karen. Soldier: The Life of Colin Powell. New York, NY: Random House, Inc., 2006.
- Foster, Col Robert A., Col Robert T. Herres, Col Bernard S. Morgan, and Col Francis W. Penney. *National Security Management: National Aerospace Programs*. Washington, DC: Industrial College of the Armed Forces, 1972.
- Glasser, Jeffrey D. *The Secret Vietnam War: The United States Air Force in Thailand*, 1961-1975. Jefferson, NC: McFarland and Company, Inc., 1995.

- Gray, Colin S. *Modern Strategy*. Oxford, United Kingdom: Oxford University Press, 1999.
- Janowitz, Morris. *The Professional Soldier*. Glencoe, Illinois: The Free Press, 1960.
- Herres, Gen Robert T. General United States Air Force, Commander in Chief North American Aerospace Defense Command, Commander in Chief Aerospace Defense Command, Commander in Chief United States Space Command, Commander Air Force Space Command, Volume One, Selected Speeches, 30 July 1984 – 6 February 1987. Colorado Springs, CO: US Air Force, 1987.
- Herres, Gen Robert T. General United States Air Force, Commander in Chief North American Aerospace Defense Command, Commander in Chief Aerospace Defense Command, Commander in Chief United States Space Command, Commander Air Force Space Command, Volume Two, Selected Speeches, 30 July 1984 – 6 February 1987. Colorado Springs, CO: US Air Force, 1987.
- Herres, Gen Robert T. General United States Air Force, Commander in Chief North American Aerospace Defense Command, Commander in Chief Aerospace Defense Command, Commander in Chief United States Space Command, Commander Air Force Space Command, Volume Three, Articles, Interviews, Statements, and Congressional Testimony, 30 July 1984 – 6 February 1987. Colorado Springs, CO: US Air Force, 1987.
- Kissinger, Henry. *Diplomacy*. New York, NY: Simon and Schuster, Inc., 1994. Moltz, James Clay. *The Politics of Space Security: Strategic Restraint and the Pursuit of National Interests*. Stanford, CA: Stanford University Press, 2008.
- Nassr, Mike. 40th Anniversary 1954: Cold War Warriors. Paducah, KY: Turner Publishing Co., 1997.
- Powaski, Ronald E. *Return to Armageddon: The United States and the Nuclear Arms Race*, 1981-1999 Oxford, UK: Oxford University Press, 2003.
- Powell, Colin L. and Joseph E. Persico. *My American Journey*. New York, NY: Random House, Inc., 1995.
- Powers, Francis Gary and Curt Gentry. *Operation Overflight: A Memoir of the U2 Incident*. Washington, DC: Brassey, Inc., 2004.
- Reef Points 2008-2009: The Annual Handbook of the Brigade of Midshipmen. Annapolis, MD: Naval Institute Press, 2008.
- The Holman Student Bible. Nashville, TN: Holman Bible Publishers, 2007.
- Worden, Colonel Mike. Rise of the Fighter Generals: The Problem of Air Force Leadership, 1945-1982. Maxwell Air Force Base, AL: Air University Press, 2007.

Briefings/Point Papers/Memos/Messages

Crowe, Adm William J. Jr., Chairman, Joint Chiefs of Staff, to the Honorable Casper Weinberger, Secretary of Defense, memorandum, 6 April 1987.

- Herres, Gen Robert T. "Strategic Aerospace Defense: The Challenges of the 1980s," Paper presented at the Air War College Associate Programs. Maxwell AFB, AL, March 1985.
- Weinberger, The Honorable Casper W. Secretary of Defense, to Adm William J. Crowe, Jr., Chairman, Joint Chiefs of Staff, memorandum, 15 April 1987.

Congressional Bills and Resolutions

Goldwater-Nichols Department of Defense Reorganization Act of 1986, Public Law 99-433, 99th Cong., 2nd Sess., 1 October 1986.

Government Documents

- Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 7401.02D, Combatant Commander Command and Control Initiatives Program, 31 October 2007.
- Citation to Accompany the Award of the Bronze Star Medal for Colonel Robert T. Herres, 9 September 1973.
- Field Grade Officer Effectiveness Report on Major Robert T. Herres, 12 June 1965 11 June 1966.
- Field Grade Officer Effectiveness Report on Colonel Robert T. Herres, 26 July 1969 9 June 1970.
- Officer Effectiveness Report on First Lieutenant Robert T. Herres, 1 February 1957 7 July 1957.
- Officer Military Record on Colonel Robert T. Herres, Air Force Form 11, 7 February 1974.

Lectures and Addresses

- Herres, Gen Robert T. Commander in Chief, US Space Command. Address. US Space Command, Peterson AFB, CO, 23 September 1985.
- Herres, Gen Robert T. Distinguished Graduate Ceremony address. US Naval Academy, Annapolis, MD, 31 March 2006.
- Herres, Gen Robert T. "Guidelines for Leadership." Lecture. Air Command and Staff College, Maxwell AFB, AL, 4 June 1985.
- Hoover, Maj Gen William. "Bob Herres." Eulogy. Funeral in honor of General Robert T. Herres, San Antonio, TX, 28 July 2008.

Personal Communications - Interviews/E-Mails

- Christian, Reverend Ronald, (Former pastor at Evangelical Lutheran Church in America, Fairfax, VA) interviewed by author, 9 March 09.
- Christian, Reverend Ronald, e-mail message to author, 3 April 2009.
- Croom, Commander William. (US Naval Academy Class of 1954 Alumni), e-mail message to author, 14 January 2009.
- Herres, Gen Robert T., (former Vice Chairman of Joint Chiefs of Staff) interviewed by Paul Ringenbach, 4 January 1995.

- Herres, Shirley, (Widow of General Herres), interviewed by author, 22 January 2009.
- Herres, Shirley, (Widow of General Herres), interviewed by author, 29 January 2009.
- Herres, Shirley, (Widow of General Herres), interviewed by author, 5 May 2009. Herres, Shirley, (Widow of General Herres), interviewed by author, 3 June 2009.
- Hoover, Maj Gen William, (US Naval Academy Class 1954), e-mail message to author, 10 April 2009.
- Hoover, Maj Gen William, (US Naval Academy Class of 1954 Alumni), interview by author, 19 January 09.
- Hoover, Maj Gen William, (US Naval Academy Class of 1954 Alumni), interview by author, 23 March 09.
- Mackenzie, Lt Gen Donald C., Royal Canadian Air Force (Deputy Commander in Chief, North American Aerospace Defense Command Colorado Springs, CO), interview by Dr. Herbert M. Zolot, 16 October 1987, transcript, #K239.0512-1848, USAF Historical Research Center, Maxwell AFB, AL.

Public Documents

US Naval Academy. *Statistical Data of the Graduating Class of 1954*. Annapolis, MD: Nimitz Library Special Collections & Archives, 1954.

Public Documents Online

- Air Force Institute of Technology. "AFIT History," http://www.afit.edu/about.cfm?a=history (accessed 27 Mar 2009).
- Cullum, Maj Gen George W. "Biographical Register of the Officers and Graduates of US Military Academy," Supplement, Volume IX, 1940-1950 (The Association of Graduates US Military Academy, 1950), http://digital-library.usma.edu/libmedia/archives/cullum/VOL9_PART0015.PDF (accessed 1 March 2009).
- Department of the Air Force. "Biography of General Robert T. Herres," http://www.af.mil/information/bios/bio.asp?bioID=5783 (accessed 6 March 2009).
- Department of the Air Force. "Biography of Major General Eugene L. Hudson," http://www.af.mil/bios/bio.asp?bioID=5871 (accessed 15 March 2009).
- Herres, Gen Robert T. official biography, Secretary of the Air Force, Office of Public Affairs, Washington, D.C.
- P.O.W. Network. "Biographies on Prisoners of War and Missing in Action (POW/MIA) from the Vietnam Conflict: Captain Robert J. Morris, Jr.," http://www.pownetwork.org/bios/m/m191.htm (accessed 20 May 2009).

Reports

Challenges for US National Security. The Staff of the Carnegie Panel on US Security and the Future of Arms Control. New York, NY: Carnegie Endowment for International Peace, 1982.

Unit and Staff Office Histories

Cole, Ronald H., Lorna S. Jaffe, Walter S. Poole, and Willard J. Webb. *The Chairmanship of the Joint Chiefs of Staff.* Washington, DC: Joint History Office, 1995.

Hanley, Timothy C. and Harry N. Waldron. *Historical Overview: Space & Missile Systems Center*, 1954-1995. Los Angeles, CA: SMC History Office, 1996.

History. 310th Strategic Wing (Provisional), 1 April – 30 June 1973.

History. 310th Strategic Wing (Provisional), 1 July – 31 December 1973.

History. 3307th Pilot Training Squadron, 1 July - 31 December 1954.

History. 3560th Pilot Training Wing, 1 July – 31 December 1955.

History. 3560th Pilot Training Wing, 1 January – 30 June 1955.

History. 449th Bombardment Wing, July - September 1971.

History. 449th Bombardment Wing, October – December 1971.

History. 449th Bombardment Wing, January – March 1972.

History. 449th Bombardment Wing, April – June 1972.

History. 449th Bombardment Wing, October - December 1972.

History. 449th Bombardment Wing, January – March 1974.

History. 7322d Air Base Wing (USAFE), 1 January - 30 June 1964.

History. 93rd Fighter-Interceptor Squadron, 30 Jun 1958.

History. Air Force Flight Test Center, 1 July 1969 - 30 June 1970.

Video Recordings

James Bamford and C. Scott Willis. *Astrospies*. A NOVA production, 56 min., 2008, DVD.